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Land Disposal Restrictions

40 CFR 268 LAND DISPOSAL RESTRICTIONS

Subpart A--General

Sec.

Subpart B--Schedule for Land Disposal Prohibition and Establishment of Treatment Standards

Subpart C--Prohibitions on Land Disposal

Subpart D--Treatment Standards

Authority: 42 U.S.C. 6905, 6912(a), 6921, and 6924.

Subpart A--General

Sec. 268.1 Purpose, scope and applicability.

(a) This part identifies hazardous wastes that are restricted from land disposal and defines those limited circumstances under which an otherwise prohibited waste may continue to be land disposed.
(b) Except as specifically provided otherwise in this part or part 261 of this chapter, the requirements of this part apply to persons who generate or transport hazardous waste and owners and operators of hazardous waste treatment, storage, and disposal facilities.
(c) Restricted wastes may continue to be land disposed as follows:

(1) Where persons have been granted an extension to the effective date of a prohibition under subpart C of this part or pursuant to Sec. 268.5, with respect to those wastes covered by the extension;
(2) Where persons have been granted an exemption from a prohibition pursuant to a petition under Sec. 268.6, with respect to those wastes and units covered by the petition;

(3) Wastes that are hazardous only because they exhibit a hazardous characteristic, and which are otherwise prohibited under this part, or part 148 of this chapter, are not prohibited if the wastes:

(i) Are disposed into a nonhazardous or hazardous injection well as defined under 40 CFR 0146.6(a); and

(ii) Do not exhibit any prohibited characteristic of hazardous waste identified in 40 CFR part 261, subpart C at the point of injection.

(4) Wastes that are hazardous only because they exhibit a hazardous characteristic, and which are otherwise prohibited under this part, are not prohibited if the wastes meet any of the following criteria, unless the wastes are subject to a specified method of treatment other than DEACT in Sec. 268.40, or are D003 reactive cyanide:

(i) The wastes are managed in a treatment system which subsequently discharges to waters of the U.S. pursuant to a permit issued under section 402 of the Clean Water Act; or

(ii) The wastes are treated for purposes of the pretreatment requirements of section 307 of the Clean Water Act; or

(iii) The wastes are managed in a zero discharge system engaged in Clean Water Act-equivalent treatment as defined in Sec. 268.37(a); and

(iv) The wastes no longer exhibit a prohibited characteristic at the point of land disposal (i.e., placement in a surface impoundment).

(d) The requirements of this part shall not affect the availability of a waiver under section 121(d)(4) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA).

(e) The following hazardous wastes are not subject to any provision of part 268:

(1) Waste generated by small quantity generators of less than 100 kilograms of non-acute hazardous waste or less than 1 kilogram of acute hazardous waste per month, as defined in Sec. 261.5 of this chapter;

(2) Waste pesticides that a farmer disposes of pursuant to Sec. 262.70;

(3) Wastes identified or listed as hazardous after November 8, 1984 for which EPA has not promulgated land disposal prohibitions or treatment standards;

(4) De minimis losses of characteristic wastes to wastewaters are not considered to be prohibited wastes and are defined as losses from normal material handling operations (e.g. spills from the unloading or transfer of materials from bins or other containers, leaks from pipes, valves or other devices used to transfer materials); minor leaks of process equipment, storage tanks or containers; leaks from well-maintained pump packings and seals; sample purgings; and relief device discharges; discharges from safety showers and rinsing and cleaning of personal safety equipment; rinsate from empty containers or from containers that are rendered empty by that rinsing; and laboratory wastes not exceeding one per cent of the total flow of wastewater into the facility's headworks on an annual basis, or with a combined annualized average concentration not exceeding one part per million in the headworks of the facility's wastewater treatment or pretreatment facility.

(f) Universal waste handlers and universal waste transporters (as defined in 40 CFR 260.10) are exempt from 40 CFR 268.7 and 268.50 for the hazardous wastes listed below. These handlers are subject to regulation under 40 CFR part 273.

(1) Batteries as described in 40 CFR 273.2;

(2) Pesticides as described in 40 CFR 273.3; and

(3) Thermostats as described in 40 CFR 273.4.

[51 FR 40638, Nov. 7, 1986; 52 FR 21016, June 4, 1987, as amended at 53 FR 27165, July 19, 1988; 53 FR 31212, Aug. 17, 1988; 54 FR 36970, Sept. 6, 1989; 55 FR 22686, June 1, 1990; 58 FR 29884, May 24, 1993; 59 FR 48043, Sept. 19, 1994; 60 FR 25542, May 11, 1995; 61 FR 15663, Apr. 8, 1996; 61 FR 33682, June 28, 1996; 62 FR 26019, May 12, 1997]

Effective Date Note: At 62 FR 26019, May 12, 1997, Sec. 268.1(e) was revised, effective Aug. 11, 1997. For the convenience of the user, the superseded text is set forth as follows:
Sec. 268.1 Purpose, scope and applicability.

* * * * *

(e) The following hazardous wastes are not subject to any provision of part 268:

(1) Waste generated by small quantity generators of less than 100 kilograms of non-acute hazardous waste or less than 1 kilogram of acute hazardous waste per month, as defined in Sec. 261.5 of this chapter;

(2) Waste pesticides that a farmer disposes of pursuant to Sec. 262.70;

(3) Wastes identified or listed as hazardous after November 8, 1984 for which EPA has not promulgated land disposal prohibitions or treatment standards.

(4) De minimis losses to wastewater treatment systems of commercial chemical product or chemical intermediates that are ignitable (D001), corrosive (D002), or are organic constituents that exhibit the characteristic of toxicity (D012-D043), and that contain underlying hazardous constituents as defined in Sec. 268.2(i), are not considered to be prohibited wastes. De minimis is defined as losses from normal material handling operations (e.g. spills from the unloading or transfer of materials from bins or other containers, leaks from pipes, valves or other devices used to transfer materials); minor leaks of process equipment, storage tanks or containers; leaks from well-maintained pump packings and seals; sample purgings; and relief device discharges; discharges from safety showers and rinsing and cleaning of personal safety equipment; and rinsate from empty containers or from containers that are rendered empty by that rinsing; or

(5) Land disposal prohibitions for hazardous characteristic wastes do not apply to laboratory wastes displaying the characteristic of ignitability (D001), corrosivity (D002), or organic toxicity (D012--D043), that are mixed with other plant wastewaters at facilities whose ultimate discharge is subject to regulation under the CWA (including wastewaters at facilities which have eliminated the discharge of wastewater), provided that the annualized flow of laboratory wastewater into the facility's headworks does not exceed one per cent, or provided that the laboratory wastes' combined annualized average concentration does not exceed one part per million in the facility's headworks.

Sec. 268.2 Definitions applicable in this part.

When used in this part the following terms have the meanings given below:

(a) Halogenated organic compounds or HOCs means those compounds having a carbon-halogen bond which are listed under appendix III to this part.

(b) Hazardous constituent or constituents means those constituents listed in appendix VIII to part 261 of this chapter.

(c) Land disposal means placement in or on the land, except in a corrective action management unit, and includes, but is not limited to, placement in a landfill, surface impoundment, waste

pile, injection well, land treatment facility, salt dome formation, salt bed formation, underground mine or cave, or placement in a concrete vault, or bunker intended for disposal purposes.

(d) Nonwastewaters are wastes that do not meet the criteria for wastewaters in paragraph (f) of this section.

(e) Polychlorinated biphenyls or PCBs are halogenated organic compounds defined in accordance with 40 CFR 761.3.

(f) Wastewaters are wastes that contain less than 1% by weight total organic carbon (TOC) and less than 1% by weight total suspended solids (TSS).

(g) Debris means solid material exceeding a 60 mm particle size that is intended for disposal and that is: A manufactured object; or plant or animal matter; or natural geologic material. However, the following materials are not debris: Any material for which a specific treatment standard is provided in Subpart D, Part 268, namely lead acid batteries, cadmium batteries, and radioactive lead solids; Process residuals such as smelter slag and residues from the treatment of waste, wastewater, sludges, or air emission residues; and Intact containers of hazardous waste that are not ruptured and that retain at least 75% of their original volume. A mixture of debris that has not been treated to the standards provided by Sec. 268.45 and other material is subject to regulation as debris if the mixture is comprised primarily of debris, by volume, based on visual inspection.

(h) Hazardous debris means debris that contains a hazardous waste listed in subpart D of part 261 of this chapter, or that exhibits a characteristic of hazardous waste identified in subpart C of part 261 of this chapter.

(i) Underlying hazardous constituent means any constituent listed in Sec. 268.48, Table UTS--Universal Treatment Standards, except fluoride, vanadium, and zinc, which can reasonably be expected to be present at the point of generation of the hazardous waste, at a concentration above the constituent-specific UTS treatment standards.

(j) Inorganic metal-bearing waste is one for which EPA has established treatment standards for metal hazardous constituents, and which does not otherwise contain significant organic or cyanide content as described in Sec. 268.3(c)(1), and is specifically listed in appendix XI of this part.

[55 FR 22686, June 1, 1990, as amended at 56 FR 3877, Jan. 31, 1991; 57 FR 37270, Aug. 18, 1992; 58 FR 8685, Feb. 16, 1993; 58 FR 29884, May 24, 1993; 59 FR 48043, Sept. 19, 1994; 60 FR 244, Jan. 3, 1995; 61 FR 15597, 15662, Apr. 8, 1996; 61 FR 33682, June 28, 1996]

Sec. 268.3 Dilution prohibited as a substitute for treatment.

(a) Except as provided in paragraph (b) of this section, no generator, transporter, handler, or owner or operator of a treatment, storage, or disposal facility shall in any way dilute a restricted waste or the residual from treatment of a restricted waste as a substitute for adequate treatment to achieve compliance with subpart D of this part, to circumvent the effective date of a prohibition in subpart C of this part, to otherwise avoid a prohibition in subpart C of this part, or to circumvent a land disposal prohibition imposed by RCRA section 3004.

(b) Dilution of wastes that are hazardous only because they exhibit a characteristic in treatment systems which include land- based units which treat wastes subsequently discharged to a water of the United States pursuant to a permit issued under section 402 of the Clean Water

Act (CWA), or which treat wastes in a CWA-equivalent treatment system, or which treat wastes for the purposes of pretreatment requirements under section 307 of the CWA is not impermissible dilution for purposes of this section unless a method other than DEACT has been specified in Sec. 268.40 as the treatment standard, or unless the waste is a D003 reactive cyanide wastewater or nonwastewater.

(c) Combustion of the hazardous waste codes listed in Appendix XI of this part is prohibited, unless the waste, at the point of generation, or after any bona fide treatment such as cyanide destruction prior to combustion, can be demonstrated to comply with one or more of the following criteria (unless otherwise specifically prohibited from combustion):

(1) The waste contains hazardous organic constituents or cyanide at levels exceeding the constituent-specific treatment standard found in Sec. 268.48;

(2) The waste consists of organic, debris-like materials (e.g., wood, paper, plastic, or cloth) contaminated with an inorganic metal-bearing hazardous waste;

(3) The waste, at point of generation, has reasonable heating value such as greater than or equal to 5000 BTU per pound;

(4) The waste is co-generated with wastes for which combustion is a required method of treatment;

(5) The waste is subject to Federal and/or State requirements necessitating reduction of organics (including biological agents); or

(6) The waste contains greater than 1% Total Organic Carbon (TOC).

[61 FR 15663, Apr. 8, 1996, as amended at 61 FR 33682, June 28, 1996]

Sec. 268.4 Treatment surface impoundment exemption.

(a) Wastes which are otherwise prohibited from land disposal under this part may be treated in a surface impoundment or series of impoundments provided that:

(1) Treatment of such wastes occurs in the impoundments;

(2) The following conditions are met:

(i) Sampling and testing. For wastes with treatment standards in subpart D of this part and/or prohibition levels in subpart C of this part or RCRA section 3004(d), the residues from treatment are analyzed, as specified in Sec. 268.7 or Sec. 268.32, to determine if they meet the applicable treatment standards or where no treatment standards have been established for the waste, the applicable prohibition levels. The sampling method, specified in the waste analysis plan under Sec. 264.13 or Sec. 265.13, must be designed such that representative samples of the sludge and the supernatant are tested separately rather than mixed to form homogeneous samples.

(ii) Removal. The following treatment residues (including any liquid waste) must be removed at least annually: residues which do not meet the treatment standards promulgated under subpart D of this part; residues which do not meet the prohibition levels established under subpart C of this part or imposed by statute (where no treatment standards have been established); residues which are from the treatment of wastes prohibited from land disposal under subpart C of this part

(where no treatment standards have been established and no prohibition levels apply); or residues from managing listed wastes which are not delisted under Sec. 260.22 of this chapter. However, residues which are the subject of a valid certification under Sec. 268.8 made no later than a year after placement of the wastes in an impoundment are not required to be removed annually. If the volume of liquid flowing through the impoundment or series of impoundments annually is greater than the volume of the impoundment or impoundments, this flow-through constitutes removal of the supernatant for the purpose of this requirement.

(iii) Subsequent management. Treatment residues may not be placed in any other surface impoundment for subsequent management unless the residues are the subject of a valid certification under Sec. 268.8 which allows disposal in surface impoundments meeting the requirements of Sec. 268.8(a).

(iv) Recordkeeping. Sampling and testing and recordkeeping provisions of Secs. 264.13 and 265.13 of this chapter apply.

(3) The impoundment meets the design requirements of Sec. 264.221(c) or Sec. 265.221(a) of this chapter, regardless that the unit may not be new, expanded, or a replacement, and be in compliance with applicable ground water monitoring requirements of subpart F of part 264 or part 264 of this chapter unless:

(i) Exempted pursuant to Sec. 264.221 (d) or (e) of this chapter, or to Sec. 265.221 (c) or (d) of this chapter; or,

(ii) Upon application by the owner or operator, the Administrator, after notice and an opportunity to comment, has granted a waiver of the requirements on the basis that the surface impoundment:

(A) Has at least one liner, for which there is no evidence that such liner is leaking;

(B) Is located more than one-quarter mile from an underground source of drinking water; and

(C) Is in compliance with generally applicable ground water monitoring requirements for facilities with permits; or,

(iii) Upon application by the owner or operator, the Administrator, after notice and an opportunity to comment, has granted a modification to the requirements on the basis of a demonstration that the surface impoundment is located, designed, and operated so as to assure that there will be no migration of any hazardous constituent into ground water or surface water at any future time.

(4) The owner or operator submits to the Regional Administrator a written certification that the requirements of Sec. 268.4(a)(3) have been met. The following certification is required:

I certify under penalty of law that the requirements of 40 CFR 268.4(a)(3) have been met for all surface impoundments being used to treat restricted wastes. I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

(b) Evaporation of hazardous constituents as the principal means of treatment is not considered to be treatment for purposes of an exemption under this section.

[51 FR 40638, Nov. 7, 1986; 52 FR 21016, June 4, 1987, as amended at 52 FR 25788, July 8, 1987; 53 FR 31212, Aug. 17, 1988; 62 FR 26019, May 12, 1997]

Effective Date Note: At 62 FR 26019, Sec. 268.4(a)(2)(iv) and (a)(4) introductory text were revised, effective Aug. 11, 1997. For the convenience of the user, the superseded text is set forth as follows:

Sec. 268.4 Treatment surface impoundment exemption.

(a) * * *

(2) * * *

(iv) Recordkeeping. The procedures and schedule for the sampling of impoundment contents, the analysis of test data, and the annual removal of residues which do not meet the treatment standards, or prohibition levels (where no treatment standards have been established), or which are from the treatment of wastes prohibited from land disposal under subpart C (where no treatment standards have been established and no prohibition levels apply), must be specified in the facility's waste analysis plan as required under Sec. 264.13 or Sec. 265.13 of this chapter.

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(4) The owner or operator submits to the Regional Administrator a written certification that the requirements of Sec. 268.4(a)(3) have been met and submits a copy of the waste analysis plan required under Sec. 268.4(a)(2). The following certification is required:

* * * * *

Sec. 268.5 Procedures for case-by-case extensions to an effective date.

(a) Any person who generates, treats, stores, or disposes of a hazardous waste may submit an application to the Administrator for an extension to the effective date of any applicable restriction established under subpart C of this part. The applicant must demonstrate the following:

(1) He has made a good-faith effort to locate and contract with treatment, recovery, or disposal facilities nationwide to manage his waste in accordance with the effective date of the applicable restriction established under subpart C of this part;

(2) He has entered into a binding contractual commitment to construct or otherwise provide alternative treatment, recovery (e.g., recycling), or disposal capacity that meets the treatment standards specified in subpart D or, where treatment standards have not been specified, such treatment, recovery, or disposal capacity is protective of human health and the environment.

(3) Due to circumstances beyond the applicant's control, such alternative capacity cannot reasonably be made available by the applicable effective date. This demonstration may include a showing that the technical and practical difficulties associated with providing the alternative capacity will result in the capacity not being available by the applicable effective date;

(4) The capacity being constructed or otherwise provided by the applicant will be sufficient to manage the entire quantity of waste that is the subject of the application;

(5) He provides a detailed schedule for obtaining required operating and construction permits or an outline of how and when alternative capacity will be available;

(6) He has arranged for adequate capacity to manage his waste during an extension and has documented in the application the location of all sites at which the waste will be managed; and

(7) Any waste managed in a surface impoundment or landfill during the extension period will meet the requirements of paragraph (h)(2) of this section.

(b) An authorized representative signing an application described under paragraph (a) of this section shall make the following certification:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

(c) After receiving an application for an extension, the Administrator may request any additional information which he deems as necessary to evaluate the application.

(d) An extension will apply only to the waste generated at the individual facility covered by the application and will not apply to restricted waste from any other facility.

(e) On the basis of the information referred to in paragraph (a) of this section, after notice and opportunity for comment, and after consultation with appropriate State agencies in all affected States, the Administrator may grant an extension of up to 1 year from the effective date. The Administrator may renew this extension for up to 1 additional year upon the request of the applicant if the demonstration required in paragraph (a) of this section can still be made. In no event will an extension extend beyond 24 months from the applicable effective date specified in subpart C of part 268. The length of any extension authorized will be determined by the Administrator based on the time required to construct or obtain the type of capacity needed by the applicant as described in the completion schedule discussed in paragraph (a)(5) of this section. The Administrator will give public notice of the intent to approve or deny a petition and provide an opportunity for public comment. The final decision on a petition will be published in the Federal Register.

(f) Any person granted an extension under this section must immediately notify the Administrator as soon as he has knowledge of any change in the conditions certified to in the application.

(g) Any person granted an extension under this section shall submit written progress reports at intervals designated by the Administrator. Such reports must describe the overall progress made toward constructing or otherwise providing alternative treatment, recovery or disposal capacity; must identify any event which may cause or has caused a delay in the development of the capacity; and must summarize the steps taken to mitigate the delay. The Administrator can revoke the extension at any time if the applicant does not demonstrate a good-faith effort to meet the schedule for completion, if the Agency denies or revokes any required permit, if conditions certified in the application change, or for any violation of this chapter.

(h) Whenever the Administrator establishes an extension to an effective date under this section, during the period for which such extension is in effect:

(1) The storage restrictions under Sec. 268.50(a) do not apply; and

(2) Such hazardous waste may be disposed in a landfill or surface impoundment only if such unit is in compliance with the technical requirements of the following provisions regardless of whether such unit is existing, new, or a replacement or lateral expansion.

(i) The landfill, if in interim status, is in compliance with the requirements of subpart F of part 265 and Sec. 265.301 (a), (c), and (d) of this chapter; or,
(ii) The landfill, if permitted, is in compliance with the requirements of subpart F of part 264 and Sec. 264.301 (c), (d) and (e) of this chapter; or
(iii) The surface impoundment, if in interim status, is in compliance with the requirements of subpart F of part 265, Sec. 265.221 (a), (c), and (d) of this chapter, and RCRA section 3005(j)(1); or
(iv) The surface impoundment, if permitted, is in compliance with the requirements of subpart F of part 264 and Sec. 264.221 (c), (d) and (e) of this chapter; or
(v) The surface impoundment, if newly subject to RCRA section 3005(j)(1) due to the promulgation of additional listings or characteristics for the identification of hazardous waste, is in compliance with the requirements of subpart F of part 265 of this chapter within 12 months after the promulgation of additional listings or characteristics of hazardous waste, and with the requirements of Sec. 265.221 (a), (c) and (d) of this chapter within 48 months after the promulgation of additional listings or characteristics of hazardous waste. If a national capacity variance is granted, during the period the variance is in effect, the surface impoundment, if newly subject to RCRA section 3005(j)(1) due to the promulgation of additional listings or characteristics of hazardous waste, is in compliance with the requirements of subpart F of part 265 of this chapter within 12 months after the promulgation of additional listings or characteristics of hazardous waste, and with the requirements of Sec. 265.221 (a), (c) and (d) of this chapter within 48 months after the promulgation of additional listings or characteristics of hazardous waste; or
(vi) The landfill, if disposing of containerized liquid hazardous wastes containing PCBs at concentrations greater than or equal to 50 ppm but less than 500 ppm, is also in compliance with the requirements of 40 CFR 761.75 and parts 264 and 265.

(i) Pending a decision on the application the applicant is required to comply with all restrictions on land disposal under this part once the effective date for the waste has been reached.

[51 FR 40638, Nov. 7, 1986; 52 FR 21016, June 4, 1987, as amended at 52 FR 25788, July 8, 1987; 54 FR 36971, Sept. 6, 1989; 55 FR 23935, June 13, 1990; 57 FR 37270, Aug. 18, 1992]

Sec. 268.6 Petitions to allow land disposal of a waste prohibited under subpart C of part 268.

(a) Any person seeking an exemption from a prohibition under subpart C of this part for the disposal of a restricted hazardous waste in a particular unit or units must submit a petition to the Administrator demonstrating, to a reasonable degree of certainty, that there will be no migration of hazardous constituents from the disposal unit or injection zone for as long as the wastes remain hazardous. The demonstration must include the following components:

(1) An identification of the specific waste and the specific unit for which the demonstration will be made;

(2) A waste analysis to describe fully the chemical and physical characteristics of the subject waste;

(3) A comprehensive characterization of the disposal unit site including an analysis of background air, soil, and water quality.

(4) A monitoring plan that detects migration at the earliest practicable time;

(5) Sufficient information to assure the Administrator that the owner or operator of a land disposal unit receiving restricted waste(s) will comply with other applicable Federal, State, and local laws.

(b) The demonstration referred to in paragraph (a) of this section must meet the following criteria:

(1) All waste and environmental sampling, test, and analysis data must be accurate and reproducible to the extent that state-of-the-art techniques allow;

(2) All sampling, testing, and estimation techniques for chemical and physical properties of the waste and all environmental parameters must have been approved by the Administrator;

(3) Simulation models must be calibrated for the specific waste and site conditions, and verified for accuracy by comparison with actual measurements;

(4) A quality assurance and quality control plan that addresses all aspects of the demonstration must be approved by the Administrator; and,

(5) An analysis must be performed to identify and quantify any aspects of the demonstration that contribute significantly to uncertainty. This analysis must include an evaluation of the consequences of predictable future events, including, but not limited to, earthquakes, floods, severe storm events, droughts, or other natural phenomena.

(c) Each petition referred to in paragraph (a) of this section must include the following:

(1) A monitoring plan that describes the monitoring program installed at and/or around the unit to verify continued compliance with the conditions of the variance. This monitoring plan must provide information on the monitoring of the unit and/or the environment around the unit. The following specific information must be included in the plan:

(i) The media monitored in the cases where monitoring of the environment around the unit is required;
(ii) The type of monitoring conducted at the unit, in the cases where monitoring of the unit is required;
(iii) The location of the monitoring stations;
(iv) The monitoring interval (frequency of monitoring at each station);
(v) The specific hazardous constituents to be monitored;
(vi) The implementation schedule for the monitoring program;
(vii) The equipment used at the monitoring stations;
(viii) The sampling and analytical techniques employed; and
(ix) The data recording/reporting procedures.

(2) Where applicable, the monitoring program described in paragraph (c)(1) of this section must be in place for a period of time specified by the Administrator, as part of his approval of the petition, prior to receipt of prohibited waste at the unit.

(3) The monitoring data collected according to the monitoring plan specified under paragraph (c)(1) of this section must be sent to the Administrator according to a format and schedule specified and approved in the monitoring plan, and

(4) A copy of the monitoring data collected under the monitoring plan specified under paragraph (c)(1) of this section must be kept on-site at the facility in the operating record.

(5) The monitoring program specified under paragraph (c)(1) of this section meet the following criteria:

(i) All sampling, testing, and analytical data must be approved by the Administrator and must provide data that is accurate and reproducible.
(ii) All estimation and monitoring techniques must be approved by the Administrator.
(iii) A quality assurance and quality control plan addressing all aspects of the monitoring program must be provided to and approved by the Administrator.

(d) Each petition must be submitted to the Administrator.

(e) After a petition has been approved, the owner or operator must report any changes in conditions at the unit and/or the environment around the unit that significantly depart from the conditions described in the variance and affect the potential for migration of hazardous constituents from the units as follows:

(1) If the owner or operator plans to make changes to the unit design, construction, or operation, such a change must be proposed, in writing, and the owner or operator must submit a demonstration to the Administrator at least 30 days prior to making the change. The Administrator will determine whether the proposed change invalidates the terms of the petition and will determine the appropriate response. Any change must be approved by the Administrator prior to being made.

(2) If the owner or operator discovers that a condition at the site which was modeled or predicted in the petition does not occur as predicted, this change must be reported, in writing, to the Administrator within 10 days of discovering the change. The Administrator will determine whether the reported change from the terms of the petition requires further action, which may include termination of waste acceptance and revocation of the petition, petition modifications, or other responses.

(f) If the owner or operator determines that there is migration of hazardous constituent(s) from the unit, the owner or operator must:

(1) Immediately suspend receipt of prohibited waste at the unit, and

(2) Notify the Administrator, in writing, within 10 days of the determination that a release has occurred.

(3) Following receipt of the notification the Administrator will determine, within 60 days of receiving notification, whether the owner or operator can continue to receive prohibited waste in the unit and whether the variance is to be revoked. The Administrator shall also determine whether further examination of any migration is warranted under applicable provisions of part 264 or part 265.

(g) Each petition must include the following statement signed by the petitioner or an authorized representative:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this petition and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

(h) After receiving a petition, the Administrator may request any additional information that reasonably may be required to evaluate the demonstration.

(i) If approved, the petition will apply to land disposal of the specific restricted waste at the individual disposal unit described in the demonstration and will not apply to any other restricted waste at that disposal unit, or to that specific restricted waste at any other disposal unit.

(j) The Administrator will give public notice in the Federal Register of the intent to approve or deny a petition and provide an opportunity for public comment. The final decision on a petition will be published in the Federal Register.

(k) The term of a petition granted under this section shall be no longer than the term of the RCRA permit if the disposal unit is operating under a RCRA permit, or up to a maximum of 10 years from the date of approval provided under paragraph (g) of this section if the unit is operating under interim status. In either case, the term of the granted petition shall expire upon the termination or denial of a RCRA permit, or upon the termination of interim status or when the volume limit of waste to be land disposed during the term of petition is reached.

(l) Prior to the Administrator's decision, the applicant is required to comply with all restrictions on land disposal under this part once the effective date for the waste has been reached.

(m) The petition granted by the Administrator does not relieve the petitioner of his responsibilities in the management of hazardous waste under 40 CFR part 260 through part 271.

(n) Liquid hazardous wastes containing polychlorinated biphenyls at concentrations greater than or equal to 500 ppm are not eligible for an exemption under this section.

[51 FR 40638, Nov. 7, 1986; 52 FR 21016, June 4, 1987, as amended at 52 FR 25789, July 8, 1987; 53 FR 31212, Aug. 17, 1988; 54 FR 36971, Sept. 6, 1989]

Sec. 268.7 Testing, tracking, and recordkeeping requirements for generators, treaters, and disposal facilities.

(a) Requirements for generators:

(1) Determine if the waste has to be treated before being land disposed, as follows: A generator of a hazardous waste must determine if the waste has to be treated before it can be land disposed. This is done by determining if the hazardous waste meets the treatment standards in Sec. 268.40 or Sec. 268.45. This determination can be made in either of two ways: testing the waste or using knowledge of the waste. If the generator tests the waste, testing would normally determine the total concentration of hazardous constituents, or the concentration of hazardous constituents in an extract of the waste obtained using test method 1311 in ``Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,'' EPA Publication SW-846, as referenced in Sec. 260.11 of this chapter, depending on whether the treatment standard for the waste is expressed as a total concentration or concentration of hazardous constituent in the waste's extract. In addition, some hazardous wastes must be treated by particular treatment methods before they can be land disposed. These treatment standards are also found in Sec.

268.40, and are described in detail in Sec. 268.42, Table 1. These wastes do not need to be tested (however, if they are in a waste mixture, other wastes with concentration level treatment standards would have to be tested). If a generator determines they are managing a waste that displays a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity, they must comply with the special requirements of Sec. 268.9 of this part in addition to any applicable requirements in this section.

(2) If the waste does not meet the treatment standard: With the initial shipment of waste to each treatment or storage facility, the generator must send a one-time written notice to each treatment or storage facility receiving the waste, and place a copy in the file. The notice must include the information in column ``268.7(a)(2)'' of the Generator Paperwork Requirements Table in Sec. 268.7(a)(4). No further notification is necessary until such time that the waste or facility change, in which case a new notification must be sent and a copy placed in the generator's file.

(3) If the waste meets the treatment standard at the original point of generation:

(i) With the initial shipment of waste to each treatment, storage, or disposal facility, the generator must send a one-time written notice to each treatment, storage, or disposal facility receiving the waste, and place a copy in the file. The notice must include the information indicated in column ``268.7(a)(3)'' of the Generator Paperwork Requirements Table in Sec. 268.7(a)(4) and the following certification statement, signed by an authorized representative:

I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR part 268 subpart D. I believe that the information I submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment.

(ii) If the waste changes, the generator must send a new notice and certification to the receiving facility, and place a copy in their files. Generators of hazardous debris excluded from the definition of hazardous waste under Sec. 261.3(f) of this chapter are not subject to these requirements.

(4) For reporting, tracking and recordkeeping when exceptions allow certain wastes that do not meet the treatment standards to be land disposed: There are certain exemptions from the requirement that hazardous wastes meet treatment standards before they can be land disposed. These include, but are not limited to case-by-case extensions under Sec. 268.5, disposal in a no-migration unit under Sec. 268.6, or a national capacity variance or case-by-case capacity variance under subpart C of this part. If a generator's waste is so exempt, then with the initial shipment of waste, the generator must send a one-time written notice to each land disposal facility receiving the waste. The notice must include the information indicated in column ``268.7(a)(4)'' of the Generator Paperwork Requirements Table below. If the waste changes, the generator must send a new notice to the receiving facility, and place a copy in their files.

Generator Paperwork Requirements Table

Required information (a)(9)	Sec. 268.7 (a)(2)	Sec. 268.7 (a)(3)	Sec. 268.7 (a)(3)	Sec. 268.7 (a)(4)
1. EPA Hazardous Waste and Manifest numbers	√	√	√	√
2. Statement: this waste is not prohibited from land disposal			√	
3. The waste is subject to the LDRs. The constituents of concern for F001-F005, and F039, and underlying hazardous constituents (for wastes that are not managed in a Clean Water Act (CWA) or CWA-equivalent facility), unless the waste will be treated and monitored for all constituents. If all constituents will be treated and monitored, there is no need to put them all on the LDR notice	√	√		
4. The notice must include the applicable wastewater/ nonwastewater category (see Secs. 268.2(d) and (f)) and subdivisions made within a waste code based on waste-specific criteria (such as D003 reactive cyanide)	√	√		
5. Waste analysis data (when available)	√	√	√	
6. Date the waste is subject to the prohibition			√	
7. For hazardous debris, when treating with the alternative treatment technologies provided by Sec.268.45: the contaminants subject to treatment, as described in Sec. 268.45(b); and an indication that these contaminants are being treated to comply with Sec. 268.45	√		√	
8. A certification is needed (see applicable section for exact wording)		√		√

(5) If a generator is managing and treating prohibited waste in tanks, containers, or containment buildings regulated under 40 CFR 262.34 to meet applicable LDR treatment standards found at Sec. 268.40, the generator must develop and follow a written waste analysis plan which describes the procedures they will carry out to comply with the treatment standards. (Generators treating hazardous debris under the alternative treatment standards of Table 1, Sec. 268.45, however, are not subject to these waste

analysis requirements.) The plan must be kept on site in the generator's records, and the following requirements must be met:

(i) The waste analysis plan must be based on a detailed chemical and physical analysis of a representative sample of the prohibited waste(s) being treated, and contain all information necessary to treat the waste(s) in accordance with the requirements of this part, including the selected testing frequency.

(ii) Such plan must be kept in the facility's on-site files and made available to inspectors.

(iii) Wastes shipped off-site pursuant to this paragraph must comply with the notification requirements of Sec. 268.7(a)(3).

(6) If a generator determines that the waste is restricted based solely on his knowledge of the waste, all supporting data used to make this determination must be retained on-site in the generator's files. If a generator determines that the waste is restricted based on testing this waste or an extract developed using the test method 1311 in ``Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,'' EPA Publication SW-846, as referenced in Sec. 260.11 of this chapter, and all waste analysis data must be retained on-site in the generator's files.

(7) If a generator determines that he is managing a restricted waste that is excluded from the definition of hazardous or solid waste or exempt from Subtitle C regulation, under 40 CFR 261.2 through 261.6 subsequent to the point of generation (including deactivated characteristic hazardous wastes managed in wastewater treatment systems subject to the Clean Water Act (CWA) as specified at 40 CFR 261.4(a)(2), or are CWA-equivalent), he must place a one-time notice stating such generation, subsequent exclusion from the definition of hazardous or solid waste or exemption from RCRA Subtitle C regulation, and the disposition of the waste, in the facility's file.

(8) Generators must retain on-site a copy of all notices, certifications, waste analysis data, and other documentation produced pursuant to this section for at least three years from the date that the waste that is the subject of such documentation was last sent to on-site or off-site treatment, storage, or disposal. The three year record retention period is automatically extended during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Administrator. The requirements of this paragraph apply to solid wastes even when the hazardous characteristic is removed prior to disposal, or when the waste is excluded from the definition of hazardous or solid waste under 40 CFR 261.2 through 261.6, or exempted from Subtitle C regulation, subsequent to the point of generation.

(9) If a generator is managing a lab pack containing hazardous wastes and wishes to use the alternative treatment standard for lab packs found at Sec. 268.42(c):

(i) With the initial shipment of waste to a treatment facility, the generator must submit a notice that provides the information in column ``Sec. 268.7(a)(9)'' in the Generator Paperwork Requirements Table of paragraph (a)(4) of this section, and the following certification. The certification, which must be signed by an authorized representative and must be placed in the generator's files, must say the following:

I certify under penalty of law that I personally have examined and am familiar with the waste and that the lab pack contains only wastes that have not been excluded under appendix IV to 40 CFR part 268 and that this lab pack will be sent to a combustion facility in compliance with the alternative treatment standards for lab packs at 40 CFR 268.42(c). I am aware that there are

significant penalties for submitting a false certification, including the possibility of fine or imprisonment.

(ii) No further notification is necessary until such time that the wastes in the lab pack change, or the receiving facility changes, in which case a new notice and certification must be sent and a copy placed in the generator's file.
(iii) If the lab pack contains characteristic hazardous wastes (D001-D043), underlying hazardous constituents (as defined in Sec. 268.2(i)) need not be determined.
(iv) The generator must also comply with the requirements in paragraphs (a)(6) and (a)(7) of this section.

(10) Small quantity generators with tolling agreements pursuant to 40 CFR 262.20(e) must comply with the applicable notification and certification requirements of paragraph (a) of this section for the initial shipment of the waste subject to the agreement. Such generators must retain on-site a copy of the notification and certification, together with the tolling agreement, for at least three years after termination or expiration of the agreement. The three-year record retention period is automatically extended during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Administrator.

(b) Treatment facilities must test their wastes according to the frequency specified in their waste analysis plans as required by 40 CFR 264.13 (for permitted TSDs) or 40 CFR 265.13 (for interim status facilities). Such testing must be performed as provided in paragraphs (b)(1), (b)(2) and (b)(3) of this section.

(1) For wastes with treatment standards expressed as concentrations in the waste extract (TCLP), the owner or operator of the treatment facility must test an extract of the treatment residues, using test method 1311 (the Toxicity Characteristic Leaching Procedure, described in ``Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,'' EPA Publication SW-846 as incorporated by reference in Sec. 260.11 of this chapter), to assure that the treatment residues extract meet the applicable treatment standards.

(2) For wastes with treatment standards expressed as concentrations in the waste, the owner or operator of the treatment facility must test the treatment residues (not an extract of such residues) to assure that they meet the applicable treatment standards.

(3) A one-time notice must be sent with the initial shipment of waste to the land disposal facility. A copy of the notice must be placed in the treatment facility's file.

(i) No further notification is necessary until such time that the waste or receiving facility change, in which case a new notice must be sent and a copy placed in the treatment facility's file.
(ii) The one-time notice must include these requirements:

Treatment Facility Paperwork Requirements Table

Required information	Sec. 268.7(b)
1. EPA Hazardous Waste and Manifest numbers.....	√
2. The waste is subject to the LDRs. The constituents of concern for F001-F005, and F039, and underlying hazardous constituents (for wastes that are not managed in a Clean Water Act (CWA) or CWA-equivalent facility),	

unless the waste will be treated and monitored for all constituents. If all constituents will be treated and monitored, there is no need to put them all on the LDR notice..... √

3. The notice must include the applicable wastewater/ nonwastewater category (see Secs. 268.2(d) and (f)) and subdivisions made within a waste code based on waste-specific criteria (such as D003 reactive cyanide)……..√

4. Waste analysis data (when available).....……√

5. A certification statement is needed (see applicable section for exact wording).....……..√

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(4) The treatment facility must submit a one-time certification signed by an authorized representative with the initial shipment of waste or treatment residue of a restricted waste to the land disposal facility. The certification must state:

I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards specified in 40 CFR 268.40 without impermissible dilution of the prohibited waste. I am aware there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

(i) A copy of the certification must be placed in the treatment facility's on-site files. If the waste or treatment residue changes, or the receiving facility changes, a new certification must be sent to the receiving facility, and a copy placed in the file.

(ii) Debris excluded from the definition of hazardous waste under Sec. 261.3(e) of this chapter (i.e., debris treated by an extraction or destruction technology provided by Table 1, Sec. 268.45, and debris that the Director has determined does not contain hazardous waste), however, is subject to the notification and certification requirements of paragraph (d) of this section rather than the certification requirements of this paragraph.

(iii) For wastes with organic constituents having treatment standards expressed as concentration levels, if compliance with the treatment standards is based in whole or in part on the analytical detection limit alternative specified in Sec. 268.40(d), the certification, signed by an authorized representative, must state the following:

I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by combustion units as specified in 268.42, Table 1. I have been unable to detect the nonwastewater organic constituents, despite having used best good-faith efforts to analyze for such constituents. I am aware there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

(5) If the waste or treatment residue will be further managed at a different treatment or storage facility, the treatment, storage or disposal facility sending the waste or treatment residue off-site must comply with the notice and certification requirements applicable to generators under this section.

(6) Where the wastes are recyclable materials used in a manner constituting disposal subject to the provisions of Sec. 266.20(b) regarding treatment standards and prohibition levels, the owner or operator of a treatment facility (i.e., the recycler) is not required to notify the

receiving facility, pursuant to paragraph (b)(4) of this section. With each shipment of such wastes the owner or operator of the recycling facility must submit a certification described in paragraph (b)(5) of this section, and a notice which includes the information listed in paragraph (b)(4) of this section (except the manifest number) to the Regional Administrator, or his delegated representative. The recycling facility also must keep records of the name and location of each entity receiving the hazardous waste-derived product.

(c) Except where the owner or operator is disposing of any waste that is a recyclable material used in a manner constituting disposal pursuant to 40 CFR 266.20(b), the owner or operator of any land disposal facility disposing any waste subject to restrictions under this part must:

(1) Have copies of the notice and certifications specified in paragraph (a) or (b) of this section.

(2) Test the waste, or an extract of the waste or treatment residue developed using test method 1311 (the Toxicity Characteristic Leaching Procedure), described in ``Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,'' EPA Publication SW-846 as incorporated by reference in Sec. 260.11 of this chapter), to assure that the wastes or treatment residues are in compliance with the applicable treatment standards set forth in subpart D of this part. Such testing must be performed according to the frequency specified in the facility's waste analysis plan as required by Sec. 264.13 or Sec. 265.13 of this chapter.

(d) Generators or treaters who first claim that hazardous debris is excluded from the definition of hazardous waste under Sec. 261.3(e) of this chapter (i.e., debris treated by an extraction or destruction technology provided by Table 1, Sec. 268.45, and debris that the EPA Regional Administrator (or his designated representative) or State authorized to implement part 268 requirements has determined does not contain hazardous waste) are subject to the following notification and certification requirements:

(1) A one-time notification, including the following information, must be submitted to the EPA Regional hazardous waste management division director (or his designated representative) or State authorized to implement part 268 requirements, or State authorized to implement part 268 requirements:

(2) The notification must be updated if the debris is shipped to a different facility, and, for debris excluded under Sec. 261.2(e)(1) of this chapter, if a different type of debris is treated or if a different technology is used to treat the debris.

(3) For debris excluded under Sec. 261.3(e)(1) of this chapter, the owner or operator of the treatment facility must document and certify compliance with the treatment standards of Table 1, Sec. 268.45, as follows:

(i) Records must be kept of all inspections, evaluations, and analyses of treated debris that are made to determine compliance with the treatment standards;
(ii) Records must be kept of any data or information the treater obtains during treatment of the debris that identifies key operating parameters of the treatment unit; and
(iii) For each shipment of treated debris, a certification of compliance with the treatment standards must be signed by an authorized representative and placed in the facility's files. The certification must state the following: ``I certify under penalty of law that the debris has been treated in accordance with the requirements of 40 CFR 268.45. I am aware that there are significant penalties for making a false certification, including the possibility of fine and imprisonment.''

[51 FR 40638, Nov. 7, 1986; 52 FR 21016, June 4, 1987, as amended at 52 FR 25789, July 8, 1987; 53 FR 31213, Aug. 17, 1988; 54 FR 26648, June 23, 1989; 54 FR 36971, Sept. 6, 1989; 55 FR 22687, June 1, 1990; 55 FR 23935, June 13, 1990; 56 FR 3877, Jan. 31, 1991; 57 FR 37270, Aug. 18, 1992; 58 FR 29884, May 24, 1993; 58 FR 46050, Aug. 31, 1993; 59 FR 47980, Sept. 19, 1994; 59 FR 48043, Sept. 19, 1994; 60 FR 244, Jan. 3, 1995; 61 FR 15598, Apr. 8, 1996; 62 FR 26019, May 12, 1997]

Effective Date Note: At 62 FR 26019, May 12, 1997, Sec. 268.7 was amended by revising the section heading, revising paragraph (a), removing paragraph (b)(2) and redesignating paragraphs (b)(3) through (b)(7) as (b)(2) through (b)(6), and by revising paragraphs (b) introductory text, (b)(1), redesignated paragraphs (b)(2) through (b)(4), (c)(1) and (c)(2), effective Aug. 11, 1997. For the convenience of the user the superseded text is set forth as follows: Sec. 268.7 Waste analysis and recordkeeping.

(a) Except as specified in Sec. 268.32, if a generator's waste is listed in 40 CFR part 261, subpart D, the generator must test his waste, or test an extract using test method 1311 (the Toxicity Characteristic Leaching Procedure, described in ``Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,'' EPA Publication SW-846 as incorporated by reference in Sec. 260.11 of this chapter), or use knowledge of the waste, to determine if the waste is restricted from land disposal under this part. Except as specified in Sec. 268.32, if a generator's waste exhibits one or more of the characteristics set out at 40 CFR part 261, subpart C, the generator must test an extract using test method 1311 (the Toxicity Characteristic Leaching Procedure, described in ``Test Methods for Evaluating Solid Waste, Physical/ Chemical Methods'' (SW-846)), or use knowledge of the waste, to determine if the waste is restricted from land disposal under this Part. If the generator determines that his waste exhibits the characteristic of ignitability (D001) (and is not in the High TOC Ignitable Liquids Subcategory or is not treated by CMBST or RORGS of Sec. 268.42, Table 1), and/or the characteristic of corrosivity (D002), and/or reactivity (D003), and/or the characteristic of organic toxicity (D012-D043), and is prohibited under Sec. 268.37, Sec. 268.38, and Sec. 268.39, the generator must determine the underlying hazardous constituents (as defined in Sec. 268.2, in the D001, D002, D003, or D012-D043 wastes.

(1) If a generator determines that he is managing a restricted waste under this part and the waste does not meet the applicable treatment standards set forth in subpart D of this part or it exceeds the applicable prohibition levels set forth in Sec. 268.32 or RCRA section 3004(d), with each shipment of waste the generator must notify the treatment or storage facility in writing. The notice must include the following information:

(i) EPA Hazardous Waste Number;
(ii) The waste constituents that the treater will monitor, if monitoring will not include all regulated constituents, for wastes F001- F005, F039, D001, D002, D003, and D012-D043. Generators must also include whether the waste is a nonwastewater or wastewater (as defined in Sec. 268.2 (d) and (f), and indicate the subcategory of the waste (such as ``D003 reactive cyanide''), if applicable;
(iii) The manifest number associated with the shipment of waste;
(iv) For hazardous debris, the contaminants subject to treatment as provided by Sec. 268.45(b) and the following statement: ``This hazardous debris is subject to the alternative treatment standards of 40 CFR 268.45;'' and
(v) The waste analysis data, where available.

(2) If a generator determines that he is managing a restricted waste under this Part, and determines that the waste can be land disposed without further treatment, with each shipment of waste he must submit, to the treatment, storage, or land disposal facility, a notice and a certification stating that the waste meets the applicable treatment standards set forth in subpart D of this part and the applicable prohibition levels set forth in Sec. 268.32 or RCRA section 3004(d). Generators of hazardous debris that is excluded from

the definition of hazardous waste under Sec. 261.3(e)(2) of this chapter (i.e., debris that the Director has determined does not contain hazardous waste), however, are not subject to these notification and certification requirements.

(i) The notice must include the following information:

(A) EPA Hazardous Waste Number;

(B) The waste constituents that the treater will monitor, if monitoring will not include all regulated constituents, for wastes F001- F005, F039, D001, D002, D003, and D012-D043. Generators must also include whether the waste is a nonwastewater or wastewater (as defined in Sec. 268.2(d) and (f)) and indicate the subcategory of the waste (such as ``D003 reactive cyanide''), if applicable;

(C) The manifest number associated with the shipment of waste;

(D) Waste analysis data, where available.

(ii) The certification must be signed by an authorized representative and must state the following:

I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR Part 268 Subpart D and all applicable prohibitions set forth in 40 CFR 268.32 or RCRA section 3004(d). I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment.

(3) If a generator's waste is subject to an exemption from a prohibition on the type of land disposal method utilized for the waste (such as, but not limited to, a case-by-case extension under Sec. 268.5, an exemption under Sec. 268.6, or a nationwide capacity variance under subpart C of this part), with each shipment of waste he must submit a notice to the facility receiving his waste stating that the waste is not prohibited from land disposal. The notice must include the following information:

(i) EPA Hazardous Waste Number;
(ii) The waste constituents that the treater will monitor, if monitoring will not include all regulated constituents, for wastes F001- F005, F039, D001, D002, D003, and D012-D043. Generators must also include whether the waste is a nonwastewater or wastewater (as defined in Sec. 268.2(d) and (f)), and indicate the subcategory of the waste (such as ``D003 reactive cyanide''), if applicable;
(iii) The manifest number associated with the shipment of waste;
(iv) Waste analysis data, where available;
(v) For hazardous debris when using the alternative treatment technologies provided by Sec. 268.45:

(A) The contaminants subject to treatment, as described in Sec. 268.45(b); and

(B) An indication that these contaminants are being treated to comply with Sec. 268.45.

(vi) For hazardous debris when using the treatment standards for the contaminating waste(s) in Sec. 268.40: the requirements described in paragraphs (a)(3) (i), (ii), (iii), (iv), and (vii) of this section; and,
(vii) The date the waste is subject to the prohibitions.

(4) If a generator is managing prohibited waste in tanks, containers, or containment buildings regulated under 40 CFR 262.34, and is treating such waste in such tanks, containers, or containment buildings to meet applicable treatment standards under subpart D of this part, the generator must develop and follow a written waste analysis plan which describes the procedures the generator will carry out to comply with the treatment standards. (Generators treating hazardous debris under the alternative treatment standards of Table 1, Sec. 268.45, however, are not subject to these waste analysis requirements.) The plan must be kept on site in the generator's records, and the following requirements must be met:

(i) The waste analysis plan must be based on a detailed chemical and physical analysis of a representative sample of the prohibited waste(s) being treated, and contain all information necessary to treat the waste(s) in accordance with the requirements of this Part, including the selected testing frequency.
(ii) Such plan must be filed with the EPA Regional Administrator (or his designated representative) or State authorized to implement Part 268 requirements a minimum of 30 days prior to the treatment activity, with delivery verified.
(iii) Wastes shipped off-site pursuant to this paragraph must comply with the notification requirements of Sec. 268.7(a)(2).

(5) If a generator determines whether the waste is restricted based solely on his knowledge of the waste, all supporting data used to make this determination must be retained on-site in the generator's files. If a generator determines whether the waste is restricted based on testing this waste or an extract developed using the test method described in Appendix I of this part, all waste analysis data must be retained on-site in the generator's files.

(6) If a generator determines that he is managing a restricted waste that is excluded from the definition of hazardous or solid waste or exempt from Subtitle C regulation, under 40 CFR 261.2 through 261.6 subsequent to the point of generation, he must place a one-time notice stating such generation, subsequent exclusion from the definition of hazardous or solid waste or exemption from RCRA Subtitle C regulation, and the disposition of the waste, in the facility's file.

(7) Generators must retain on-site a copy of all notices, certifications, demonstrations, waste analysis data, and other documentation produced pursuant to this section for at least five years from the date that the waste that is the subject of such documentation was last sent to on-site or off-site treatment, storage, or disposal. The five year record retention period is automatically extended during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Administrator. The requirements of this paragraph apply to solid wastes even when the hazardous characteristic is removed prior to disposal, or when the waste is excluded from the definition of hazardous or solid waste under 40 CFR 261.2 through 261.6, or exempted from RCRA Subtitle C regulation, subsequent to the point of generation.

(8) If a generator is managing a lab pack that contains none of the wastes specified in appendix IV of part 268, and wishes to use the alternative treatment standard under Sec. 268.42(c), with each shipment of waste the generator must submit a notice to the treatment facility in accordance with paragraph (a)(1) of this section, except that underlying hazardous constituents need not be determined. The generator must also comply with the requirements in paragraphs (a)(5) and (a)(6) of this section and must submit the following certification, which must be signed by an authorized representative:

I certify under penalty of law that I personally have examined and am familiar with the waste and that the lab pack does not contain any wastes identified at Appendix IV to part 268. I am aware

that there are significant penalties for submitting a false certification including possibility of fine or imprisonment.

(9) [Reserved]

(10) Small quantity generators with tolling agreements pursuant to 40 CFR 262.20(e) must comply with the applicable notification and certification requirements of paragraph (a) of this section for the initial shipment of the waste subject to the agreement. Such generators must retain on-site a copy of the notification and certification, together with the tolling agreement, for at least three years after termination or expiration of the agreement. The three-year record retention period is automatically extended during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Administrator.

(b) Treatment facilities must test their wastes according to the frequency specified in their waste analysis plans as required by Sec. 264.13 or Sec. 265.13. Such testing must be performed as provided in paragraphs (b)(1), (b)(2) and (b)(3) of this section.

(1) For wastes with treatment standards expressed as concentrations in the waste extract (Sec. 268.41), the owner or operator of the treatment facility must test the treatment residues, or an extract of such residues developed using the test method described in appendix I of this part, to assure that the treatment residues or extract meet the applicable treatment standards.

(2) For wastes that are prohibited under Sec. 268.32 of this part or RCRA section 3004(d) but not subject to any treatment standards under subpart D of this part, the owner or operator of the treatment facility must test the treatment residues according to the generator testing requirements specified in Sec. 268.32 to assure that the treatment residues comply with the applicable prohibitions.

(3) For wastes with treatment standards expressed as concentrations in the waste (Sec. 268.43), the owner or operator of the treatment facility must test the treatment residues (not an extract of such residues) to assure that the treatment residues meet the applicable treatment standards.

(4) A notice must be sent with each waste shipment to the land disposal facility which includes the following information, except that debris excluded from the definition of hazardous waste under Sec. 261.3(e) of this chapter (i.e., debris treated by an extraction or destruction technology provided by Table 1, Sec. 268.45, and debris that the Director has determined does not contain hazardous waste) is subject to the notification and certification requirements of paragraph (d) of this section rather than these notification requirements:

(i) EPA Hazardous Waste Number;

(ii) The waste constituents to be monitored, if monitoring will not include all regulated constituents, for wastes F001-F005, F039, D001, D002, D003, and D012-D043. Generators must also include whether the waste is a nonwastewater or wastewater (as defined in Sec. 268.2(d) and (f), and indicate the subcategory of the waste (such as D003 reactive cyanide), if applicable;

(iii) The manifest number associated with the shipment of waste; and

(iv) Waste analysis data, where available.

(5) The treatment facility must submit a certification with each shipment of waste or treatment residue of a restricted waste to the land disposal facility stating that the waste or treatment residue has been treated in compliance with the applicable performance

standards specified in subpart D of this part and the applicable prohibitions set forth in Sec. 268.32 or RCRA section 3004(d). Debris excluded from the definition of hazardous waste under Sec. 261.3(e) of this chapter (i.e., debris treated by an extraction or destruction technology provided by Table 1, Sec. 268.45, and debris that the Director has determined does not contain hazardous waste), however, is subject to the notification and certification requirements of paragraph (d) of this section rather than the certification requirements of this paragraph (b)(5).

(i) For wastes with treatment standards expressed as concentrations in the waste extract or in the waste (Sec. 268.41 or Sec. 268.43), or for wastes prohibited under Sec. 268.32 of this part or RCRA section 3004(d) which are not subject to any treatment standards under subpart D of this part, the certification must be signed by an authorized representative and must state the following:

I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification and that, based on my inquiry of those individuals immediately responsible for obtaining this information. I believe that the treatment process has been operated and maintained properly so as to comply with the performance levels specified in 40 CFR part 268, subpart D, and all applicable prohibitions set forth in 40 CFR 268.32 or RCRA section 3004(d) without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

(ii) For wastes with treatment standards expressed as technologies (Sec. 268.42), the certification must be signed by an authorized representative and must state the following:

I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.42. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

(iii) For wastes with treatment standards expressed as concentrations in the waste pursuant to Sec. 268.43, if compliance with the treatment standards in subpart D of this part is based in part or in whole on the analytical detection limit alternative specified in Sec. 268.43(c), the certification also must state the following:

I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification and that, based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by incineration in units operated in accordance with 40 CFR part 264, subpart O or 40 CFR part 265, subpart O, or by combustion in fuel substitution units operating in accordance with applicable technical requirements, and I have been unable to detect the nonwastewater organic constituents despite having used best good faith efforts to analyze for such constituents. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

(iv) For characteristic wastes D001, D002, D003, and D012-D043 that are: subject to the treatment standards in Sec. 268.40 (other than those expressed as a required method of treatment); that are reasonably expected to contain underlying hazardous constituents as defined in Sec. 268.2(i); are treated on-site to remove the hazardous characteristic; and are then sent off-site for treatment of underlying hazardous constituents, the certification must state the following:

I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet universal treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

(v) For characteristic wastes D001, D002, D003 and D012-D043 that contain underlying hazardous constituents as defined in Sec. 268.2(i) that are treated on-site to remove the hazardous characteristic and to treat underlying hazardous constituents to levels in Sec. 268.48 Universal Treatment Standards, the certification must state the following:

I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 to remove the hazardous characteristic, and that underlying hazardous constituents, as defined in Sec. 268.2, have been treated on-site to meet the Sec. 268.48 Universal Treatment Standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

* * * * *

(c) * * *

(1) Have copies of the notice and certifications specified in paragraph (a) or (b) of this section, and the certification specified in Sec. 268.8 if applicable.

(2) Test the waste, or an extract of the waste or treatment residue developed using the test method described in appendix I of this part or using any methods required by generators under Sec. 268.32 of this part, to assure that the wastes or treatment residues are in compliance with the applicable treatment standards set forth in subpart D of this part and all applicable prohibitions set forth in Sec. 268.32 of this part or in RCRA section 3004(d). Such testing must be performed according to the frequency specified in the facility's waste analysis plan as required by Sec. 264.13 or Sec. 265.13.

Sec. 268.8 [Reserved]

Sec. 268.9 Special rules regarding wastes that exhibit a characteristic.

(a) The initial generator of a solid waste must determine each EPA Hazardous Waste Number (waste code) applicable to the waste in order to determine the applicable treatment standards under subpart D of this part. For purposes of part 268, the waste will carry the waste code for any applicable listed waste (Part 261, Subpart D). In addition, where the waste exhibits a characteristic, the waste will carry one or more of the characteristic waste codes (Part 261, Subpart C), except when the treatment standard for the listed waste operates in lieu of the treatment standard for the characteristic waste, as specified in paragraph (b) of this section. If the generator determines that their waste displays a hazardous characteristic (and is not D001 nonwastewaters treated by CMBST, RORGS, OR POLYM of Sec. 268.42, Table 1), the generator must determine the underlying hazardous constituents (as defined at Sec. 268.2(i)) in the characteristic waste.

(b) Where a prohibited waste is both listed under 40 CFR part 261, subpart D and exhibits a characteristic under 40 CFR part 261, subpart C, the treatment standard for the waste code listed in 40 CFR part 261, subpart D will operate in lieu of the standard for the waste code under 40 CFR part 261, subpart C, provided that the treatment standard for the listed waste includes a treatment standard for the constituent that causes the waste to exhibit the

characteristic. Otherwise, the waste must meet the treatment standards for all applicable listed and characteristic waste codes.

(c) In addition to any applicable standards determined from the initial point of generation, no prohibited waste which exhibits a characteristic under 40 CFR part 261, subpart C may be land disposed unless the waste complies with the treatment standards under subpart D of this part.

(d) Wastes that exhibit a characteristic are also subject to Sec. 268.7 requirements, except that once the waste is no longer hazardous, a one-time notification and certification must be placed in the generators or treaters files and sent to the EPA region or authorized state. The notification and certification that is placed in the generators or treaters files must be updated if the process or operation generating the waste changes and/or if the subtitle D facility receiving the waste changes. However, the generator or treater need only notify the EPA region or an authorized state on an annual basis if such changes occur. Such notification and certification should be sent to the EPA region or authorized state by the end of the calendar year, but no later that December 31.

(1) The notification must include the following information:

(i) Name and address of the RCRA Subtitle D facility receiving the waste shipment; and
(ii) A description of the waste as initially generated, including the applicable EPA hazardous waste code(s), treatability group(s), and underlying hazardous constituents (as defined in Sec. 268.2(i)), unless the waste will be treated and monitored for all underlying hazardous constituents. If all underlying hazardous constituents will be treated and monitored, there is no requirement to list any of the underlying hazardous constituents on the notice.

(2) The certification must be signed by an authorized representative and must state the language found in Sec. 268.7(b)(5).

(i) If treatment removes the characteristic but does not treat underlying hazardous constituents, then the certification found in Sec. 268.7(b)(5)(iv) applies.
(ii) [Reserved]

[55 FR 22688, June 1, 1990, as amended at 56 FR 3878, Jan. 31, 1991; 57 FR 37271, Aug. 18, 1992; 58 FR 29885, May 24, 1993; 59 FR 48045, Sept. 19, 1994; 60 FR 245, Jan. 3, 1995; 61 FR 15599, 15662, Apr. 8, 1996; 62 FR 26022, May 12, 1997]

Effective Date Note: At 62 FR 26022, May 12, 1997, Sec. 268.9(a) and (d)(1)(ii) were revised, effective Aug. 11, 1997. For the convenience of the user, the superseded text is set forth as follows: Sec. 268.9 Special rules regarding wastes that exhibit a characteristic.

(a) The initial generator of a solid waste must determine each EPA Hazardous Waste Number (waste code) applicable to the waste in order to determine the applicable treatment standards under subpart D of this part. For purposes of this part 268, the waste will carry the waste code for any applicable listing under 40 CFR part 261, subpart D. In addition, the waste will carry one or more of the waste codes under 40 CFR part 261, subpart C, where the waste exhibits a characteristic, except in the case when the treatment standard for the waste code listed in 40 CFR part 261, subpart D operates in lieu of the standard for the waste code under 40 CFR part 261, subpart C, as specified in paragraph (b) of this section. If the generator determines that his waste displays a hazardous characteristic (and the waste is not a D004--D011 waste, a High TOC D001, or is not treated by CMBST, or RORGS of Sec. 268.42, Table 1), the generator must determine what underlying hazardous constituents (as

defined in Sec. 268.2), are reasonably expected to be present above the universal treatment standards found in Sec. 268.48.

* * * * *

(d) * * *

(1) * * *

(ii) A description of the waste as initially generated, including the applicable EPA Hazardous Waste Number(s), treatability group(s), and underlying hazardous constituents (as defined in Sec. 268.2(i) in D001 and D002 wastes prohibited under Sec. 268.37, or D012-D043 wastes under Sec. 268.38.

Subpart B--Schedule for Land Disposal Prohibition and Establishment of Treatment Standards

Source: 51 FR 19305, May 28, 1986, unless otherwise noted.

Secs. 268.10--268.12 [Reserved]

Sec. 268.13 Schedule for wastes identified or listed after November 8, 1984.

In the case of any hazardous waste identified or listed under section 3001 after November 8, 1984, the Administrator shall make a land disposal prohibition determination within 6 months after the date of identification or listing.

Sec. 268.14 Surface impoundment exemptions.

(a) This section defines additional circumstances under which an otherwise prohibited waste may continue to be placed in a surface impoundment.

(b) Wastes which are newly identified or listed under section 3001 after November 8, 1984, and stored in a surface impoundment that is newly subject to subtitle C of RCRA as a result of the additional identification or listing, may continue to be stored in the surface impoundment for 48 months after the promulgation of the additional listing or characteristic, not withstanding that the waste is otherwise prohibited from land disposal, provided that the surface impoundment is in compliance with the requirements of subpart F of part 265 of this chapter within 12 months after promulgation of the new listing or characteristic.

(c) Wastes which are newly identified or listed under section 3001 after November 8, 1984, and treated in a surface impoundment that is newly subject to subtitle C of RCRA as a result of the additional identification or listing, may continue to be treated in that surface impoundment, not withstanding that the waste is otherwise prohibited from land disposal, provided that surface impoundment is in compliance with the requirements of subpart F of part 265 of this chapter within 12 months after the promulgation of the new listing or characteristic. In addition, if the surface impoundment continues to treat hazardous waste after 48 months from promulgation of the additional listing or characteristic, it must then be in compliance with Sec. 268.4.

[57 FR 37271, Aug. 18, 1992]

Subpart C--Prohibitions on Land Disposal

Sec. 268.30 Waste specific prohibitions--wood preserving wastes.

(a) Effective August 11, 1997, the following wastes are prohibited from land disposal: the wastes specified in 40 CFR part 261 as EPA Hazardous Waste numbers F032, F034, and F035.

(b) Effective May 12, 1999, the following wastes are prohibited from land disposal: soil and debris contaminated with F032, F034, F035; and radioactive wastes mixed with EPA Hazardous waste numbers F032, F034, and F035.

(c) Between May 12, 1997 and May 12, 1999, soil and debris contaminated with F032, F034, F035; and radioactive waste mixed with F032, F034, and F035 may be disposed in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in Sec. 268.5(h)(2) of this part.

(d) The requirements of paragraphs (a) and (b) of this section do not apply if:

(1) The wastes meet the applicable treatment standards specified in Subpart D of this part;

(2) Persons have been granted an exemption from a prohibition pursuant to a petition under Sec. 268.6, with respect to those wastes and units covered by the petition;

(3) The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under Sec. 268.44; or

(4) Persons have been granted an extension to the effective date of a prohibition pursuant to Sec. 268.5, with respect to those wastes covered by the extension.

(e) To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in Sec. 268.40, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable Universal Treatment Standard levels of Sec. 268.48 of this part, the waste is prohibited from land disposal, and all requirements of part 268 are applicable, except as otherwise specified.

[62 FR 26022, May 12, 1997]

Effective Date Note: At 62 FR 26022, May 12, 1997, Sec. 268.30 was revised, effective Aug. 11, 1997, except paragraph (b), which is effective May 12, 1999. For the convenience of the user, the superseded text is set forth as follows:

Sec. 268.30 Waste specific prohibitions--Solvent wastes.

(a) Effective November 8, 1986, the spent solvent wastes specified in 40 CFR 261.31 as EPA Hazardous Waste Nos. F001, F002, F003, F004, and F005, are prohibited under this part from land disposal (except in an injection well) unless one or more of the following conditions apply:

(1) The generator of the solvent waste is a small quantity generator of 100-1000 kilograms of hazardous waste per month; or

(2) The solvent waste is generated from any response action taken under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) or any corrective action taken under the Resource Conservation and Recovery Act (RCRA), except where the waste is contaminated soil or debris; or

(3) The initial generator's solvent waste is a solvent water mixture, solvent-containing sludge or solid, or solvent contaminated soil (non-CERCLA or RCRA corrective action) containing less than 1 percent total F001-F005 solvent constituents listed in Table CCWE of Sec. 268.41 of this part; or

(4) The solvent waste is a residue from treating a waste described in paragraphs (a)(1), (a)(2), or (a)(3) of this section; or the solvent waste is a residue from treating a waste not described in paragraphs (a)(1), (a)(2), or (a)(3) of this section provided such residue belongs to a different treatability group than the waste as initially generated and wastes belonging to such a treatability group are described in paragraph (a)(3) of this section.

(b) Effective November 8, 1988, the F001-F005 solvent wastes listed in paragraphs (a) (1), (2), (3), or (4) of this section are prohibited from land disposal.

(c) Effective November 8, 1990, the F001-F005 solvent wastes which are contaminated soil and debris resulting from a response action taken under section 104 or 106 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) or a corrective action required under subtitle C of the Resource Conservation and Recovery Act (RCRA) and the residues from treating these wastes are prohibited from land disposal. Between November 8, 1988, and November 8, 1990, these wastes may be disposed in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in Sec. 268.5(h)(2).

(d) The requirements of paragraphs (a), (b), and (c) of this section do not apply if:

(1) The wastes meet the standards of subpart D of this part; or

(2) Persons have been granted an exemption from a prohibition pursuant to a petition under Sec. 268.6, with respect to those wastes and units covered by the petition; or

(3) Persons have been granted an extension to the effective date of a prohibition pursuant to Sec. 268.5, with respect to those wastes and units covered by the extension.

[53 FR 31216, Aug. 17, 1988]

Sec. 268.31 Waste specific prohibitions--Dioxin-containing wastes.

(a) Effective November 8, 1988, the dioxin-containing wastes specified in 40 CFR 261.31 as EPA Hazardous Waste Nos. F020, F02l, F022, F023, F026, F027, and F028, are prohibited from land disposal unless the following condition applies:

(1) The F020-F023 and F026-F028 dioxin-containing waste is contaminated soil and debris resulting from a response action taken under section 104 or 106 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) or a corrective action taken under subtitle C of the Resource Conservation and Recovery Act (RCRA).

(b) Effective November 8, 1990, the F020-F023 and F026-F028 dioxin- containing wastes listed in paragraph (a)(1) of this section are prohibited from land disposal.

(c) Between November 8, 1988, and November 8, 1990, wastes included in paragraph (a)(1) of this section may be disposed in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in Sec. 268.5(h)(2) and all other applicable requirements of parts 264 and 265 of this chapter.

(d) The requirements of paragraphs (a) and (b) of this section do not apply if:

(1) The wastes meet the standards of subpart D of this part; or

(2) Persons have been granted an exemption from a prohibition pursuant to a petition under Sec. 268.6, with respect to those wastes and units covered by the petition; or

(3) Persons have been granted an extension to the effective date of a prohibition pursuant to Sec. 268.5, with respect to those wastes covered by the extension.

[53 FR 31216, Aug. 17, 1988]

Sec. 268.32 Waste specific prohibitions--California list wastes.

(a) Effective July 8, 1987, the following hazardous wastes are prohibited from land disposal (except in injection wells):

(1) Liquid hazardous wastes having a pH less than or equal to two (2.0);

(2) Liquid hazardous wastes containing polychlorinated biphenyls (PCBs) at concentrations greater than or equal to 50 ppm;

(3) Liquid hazardous wastes that are primarily water and contain halogenated organic compounds (HOCs) in total concentration greater than or equal to 1,000 mg/l and less than 10,000 mg/l HOCs.

(b)--(c) [Reserved]

(d) The requirements of paragraphs (a) and (e) of this section do not apply until:

(1) July 8, 1989 where the wastes are contaminated soil or debris not resulting from a response action taken under section 104 or 106 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or a corrective action taken under Subtitle C of the Resource Conservation and Recovery Act (RCRA). Between July 8, 1987 and July 8, 1989, the wastes may be disposed in a landfill or surface impoundment only if such disposal is in compliance with the requirements specified in Sec. 268.5(h)(2).

(2) November 8, 1990 where the wastes are contaminated soil or debris resulting from a response action taken under section 104 or 106 of CERCLA or a corrective action taken under Subtitle C of RCRA. Between November 8, 1988, and November 8, 1990, the wastes may be disposed in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in Sec. 268.5(h)(2).

(e) Effective November 8, 1988, the following hazardous wastes are prohibited from land disposal (subject to any regulations that may be promulgated with respect to disposal in injection wells):

(1) Liquid hazardous wastes that contain HOCs in total concentration greater than or equal to 1,000 mg/1 and are not prohibited under paragraph (a)(3) of this section; and

(2) Nonliquid hazardous wastes containing HOCs in total concentration greater than or equal to 1,000 mg/kg and are not wastes described in paragraph (d) of this section.

(f) Between July 8, 1987 and November 8, 1988, the wastes included in paragraphs (e)(1) and (e)(2) of this section may be disposed in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in Sec. 268.5(h)(2).

(g) The requirements of paragraphs (a), (d), and (e) of this section do not apply if:

(1) Persons have been granted an exemption from a prohibition pursuant to a petition under Sec. 268.6, with respect to those wastes and units covered by the petition (except for liquid hazardous wastes containing polychlorinated bi-phenyls at concentrations greater than or equal to 500 ppm which are not eligible for such exemptions); or

(2) Persons have been granted an extension to the effective date of a prohibition pursuant to Sec. 268.5, with respect to those wastes covered by the extension; or

(3) The wastes meet the applicable standards specified in subpart D of this part or, where treatment standards are not specified, the wastes are in compliance with the applicable prohibitions set forth in this section or RCRA section 3004(d).

(h) The prohibitions and effective dates specified in paragraphs (a)(3), (d), and (e) of this section do not apply where the waste is subject to a part 268 subpart C prohibition and effective date for a specified HOC (such as a hazardous waste chlorinated solvent, see e.g., Sec. 268.30(a)).

(i) To determine whether or not a waste is a liquid under paragraphs (a) and (e) of this section and under RCRA section 3004(d), the following test must be used: Method 9095 (Paint Filter Liquids Test) as described in ``Test Methods for Evaluating Solid Wastes, Physical/ Chemical Methods,'' EPA Publication No. SW-846. (Incorporated by reference, see Sec. 260.11(a) of this chapter.)

(j) Except as otherwise provided in this paragraph, the waste analysis and recordkeeping requirements of Sec. 268.7 are applicable to wastes prohibited under this part or RCRA section 3004(d):

(1) The initial generator of a liquid hazardous waste must test his waste (not an extract or filtrate) in accordance with the procedures specified in Sec. 261.22(a)(1), or use knowledge of the waste, to determine if the waste has a pH less than or equal to two (2.0). If the liquid waste has a pH less than or equal to two (2.0), it is restricted from land disposal and all requirements of part 268 are applicable, except as otherwise specified in this section.

(2) The initial generator of either a liquid hazardous waste containing polychlorinated biphenyls (PCBs) or a liquid or nonliquid hazardous waste containing halogenated organic compounds (HOCs) must test his waste (not an extract or filtrate), or use knowledge of the waste, to determine whether the concentration levels in the waste equal or exceed the prohibition levels specified in this section. If the concentration of PCBs or HOCs in the waste is greater than or equal to the prohibition levels specified in this section, the waste is restricted from land disposal and all requirements of part 268 are applicable, except as otherwise specified in this section.

[52 FR 25790, July 8, 1987, as amended at 52 FR 41296, Oct. 27, 1987; 53 FR 31216, Aug. 17, 1988; 54 FR 36972, Sept. 6, 1989]

Effective Date Note: At 62 FR 26022, May 12, 1997, Sec. 268.32 was removed and reserved, effective Aug. 11, 1997.

Sec. 268.33 Waste specific prohibitions--First third wastes

(a) Effective August 8, 1988, the wastes specified in 40 CFR 261.32 as EPA Hazardous Waste Nos. F006 (nonwastewater), K001, K004 wastes specified in Sec. 268.43(a), K008 wastes specified in Sec. 268.43(a), K016, K018, K019, K020, K021 wastes specified in Sec. 268.43(a), K022 (nonwastewater), K024, K025 nonwastewaters specified in Sec. 268.43(a), K030, K036 (nonwastewater), K037, K044, K045, nonexplosive K046 (nonwastewater), K047, K060 (nonwastewater), K061 (nonwastewaters containing less than 15% zinc), K062, non CaS04 K069 (nonwastewaters), K086 (solvent washes), K087, K099, K100 nonwastewaters specified in Sec. 268.43(a), K101 (wastewater), K101 (nonwastewater, low arsenic subcategory--less than 1% total arsenic), K102 (wastewater), K102 (nonwastewater, low arsenic subcategory--less than 1% total arsenic), K103, and K104 are prohibited from land disposal (except in an injection well).

(1) Effective August 8, 1988 and continuing until August 7, 1990, K061 wastes containing 15% zinc or greater are prohibited from land disposal pursuant to the treatment standards specified in Sec. 268.41 applicable to K061 wastes that contain less than 15% zinc.

(b) Effective August 8, 1990, the waste specified in 40 CFR 261.32 as EPA Hazardous Waste Nos. K071 is prohibited from land disposal.

(c) Effective August 8, 1990, the wastes specified in 40 CFR 268.10 having a treatment standard in subpart D of this part based on incineration and which are contaminated soil and debris are prohibited from land disposal.

(d) Between November 8, 1988 and August 8, 1990, wastes included in paragraphs (b) and (c) of this section may be disposed of in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in Sec. 268.5(h)(2).

(e) The requirements of paragraphs (a), (b), (c), and (d) of this section do not apply if:

(1) The wastes meet the applicable standards specified in subpart D of this part; or

(2) Persons have been granted an exemption from a prohibition pursuant to a petition under Sec. 268.6, with respect to those wastes and units covered by the petition; or

(3) Persons have been granted an extension to the effective date of a prohibition pursuant to Sec. 268.5, with respect to those wastes covered by the extension.

(f) Between August 8, 1988, and May 8, 1990, the wastes specified in Sec. 268.10 for which treatment standards under subpart D of this part have not been promulgated, including those wastes which are subject to the statutory prohibitions of RCRA section 3004(d) or codified prohibitions under Sec. 268.32 of this part, but not including wastes subject to a treatment standard under Sec. 268.42 of this part, are prohibited from disposal in a landfill or surface impoundment unless a demonstration and certification have been submitted to Sec. 268.8.

(g) To determine whether a hazardous waste listed in Sec. 268.10 exceeds the applicable treatment standards specified in Sec. 268.41 and Sec. 268.43, the initial generator must test a representative sample of the waste extract or the entire waste depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the

applicable subpart D levels, the waste is prohibited from land disposal and all requirements of part 268 are applicable, except as otherwise specified.

[53 FR 31217, Aug. 17, 1988, as amended at 54 FR 36972, Sept. 6, 1989; 55 FR 23935, June 13, 1990; 56 FR 3878, Jan. 31, 1991]

Effective Date Note: At 62 FR 26022, May 12, 1997, Sec. 268.33 was removed and reserved, effective Aug. 11, 1997.

Sec. 268.34 Waste specific prohibitions--Second third wastes.

(a) Effective June 8, 1989, the following wastes specified in 40 CFR 261.31 as EPA Hazardous Waste Nos. F010; F024; the wastes specified in 40 CFR 261.32 as EPA Hazardous Waste Nos. K005, K007; K009 (nonwastewaters), K010; K023; K027; K028; K029 (nonwastewaters); K036 (wastewaters); K038; K039; K040; K043; K093; K094; K095 (nonwastewaters); K096 (nonwastewaters); K113; K114; K115; K116; and the wastes specified in 40 CFR 261.33 as EPA Hazardous Waste Nos. P013; P021; P029; P030; P039; P040; P041; P043; P044; P062; P063; P071; P074; P085; P089; P094: P097; P098; P099; P104; P106; P109; P111; P121; U028; U058; U069; U087; U088; U102; U107; U221; U223; and U235 are prohibited from land disposal.

(b) Effective June 8, 1989, the following wastes specified in 40 CFR 261.32 as EPA Hazardous Waste Nos. K009 (wastewaters), K011 (nonwastewaters), K013 (nonwastewaters), and K014 (nonwastewaters) are prohibited from land disposal except when they are underground injected pursuant to 40 CFR 148.14(f) and 148.15(d).

(c) Effective July 8, 1989, the wastes specified in 40 CFR 261.31 as EPA Hazardous Waste Nos. F006--cyanide (nonwastewater); F008; F009; F011 (wastewaters) and F012 (wastewaters) are prohibited from land disposal.

(1) Effective July 8, 1989, the following waste specified in 40 CFR 261.31 as EPA Hazardous Waste No. F007 is prohibited from land disposal except when it is underground injected pursuant to 40 CFR 148.14(f).

(2) Effective July 8, 1989 and continuing until December 8, 1989, F011 (nowastewaters) and F012 (nonwastewaters) are prohibited from land disposal pursuant to the treatment standards specified in Secs. 268.41 and 268.43 applicable to F007, F008, and F009 nonwastewaters. Effective December 8, 1989 F011 (nowastewaters) and F012 (nonwastewaters) are prohibited from land disposal pursuant to the treatment standards specified in Secs. 268.41 and 268.43 applicable to F011 (nonwastewaters) and F012 (nonwastewaters).

(d) Effective June 8, 1991, the wastes specified in this section having a treatment standard in subpart D of this part based on incineration, and which are contaminated soil and debris are prohibited from land disposal.

(e) Between June 8, 1989 and June 8, 1991, (for wastes F007, F008, F009, F011, and F012 between June 8, 1989 and July 8, 1989) wastes included in paragraphs (c) and (d) of this section may be disposed in a landfill or surface impoundment, regardless whether such unit is a new, replacement, or lateral expansion unit, only if such unit is in compliance with the technical requirements specified in Sec. 268.5(h)(2).

(f) The requirements of paragraphs (a), (b), (c), and (d) of this section do not apply if:

(1) The wastes meet the applicable standards specified in subpart D of this part; or

(2) Persons have been granted an exemption from a prohibition pursuant to a petition under Sec. 268.6, with respect to those wastes and units covered by the petition.

(g) The requirements of paragraphs (a), (b), and (c) of this section do not apply if persons have been granted an extension to the effective date of a prohibition pursuant to Sec. 268.5, with respect to those wastes covered by the extension.

(h) Between June 8, 1989 and May 8, 1990, the wastes specified in Sec. 268.11 for which treatment standards under subpart D of this part are not applicable, including California list wastes subject to the statutory prohibitions of RCRA section 3004(d) or codified prohibitions under Sec. 268.32, are prohibited from disposal in a landfill or surface impoundment unless the wastes are the subject of a valid demonstration and certification pursuant to Sec. 268.8.

(i) To determine whether a hazardous waste listed in Secs. 268.10, 268.11, and 268.12 exceeds the applicable treatment standards specified in Secs. 268.41 and 268.43, the initial generator must test a representative sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable subpart D levels, the waste is prohibited from land disposal and all requirements of part 268 are applicable, except as otherwise specified.

[54 FR 26648, June 23, 1989]

Effective Date Note: At 62 FR 26022, May 12, 1997, Sec. 268.34 was removed and reserved, effective Aug. 11, 1997.

Sec. 268.35 Waste specific prohibitions--Third third wastes.

(a) Effective August 8, 1990, the following wastes specified in 40 CFR 261.31 as EPA Hazardous Waste Numbers F002 (1,1,2-trichloroethane), F005 (benzene), F005 (2-ethoxy ethanol) F005 (2-nitropropane), F006 (wastewaters), F019, F025, and F039 (wastewaters); the wastes specified in 40 CFR 261.32 as EPA Hazardous Waste Numbers K002; K003; K004 (wastewaters); K005 (wastewaters); K006; K008 (wastewaters); K011 (wastewaters); K013 (wastewaters); K014 (wastewaters); K015 (nonwastewaters); K017; K021 (wastewaters); K022 (wastewaters); K025 (wastewaters); K026; K029 (wastewaters); K031 (wastewaters); K032; K033; K034; K035; K041; K042; K046 (wastewaters, reactive nonwastewaters); K048 (wastewaters); K049 (wastewaters); K050 (wastewaters); K051 (wastewaters); K052 (wastewaters); K060 (wastewaters); K061 (wastewaters) and (high zinc subcategory > 15% zinc); K069 (wastewaters, calcium sulfate nonwastewaters); K073, K083; K084 (wastewaters); K085; K095 (wastewaters); K096 (wastewaters); K097; K098; K100 (wastewaters); K101 (wastewaters); K102 (wastewaters); K105; and K106 (wastewaters); the wastes specified in 40 CFR 261.33(e) as EPA Hazardous Waste Numbers P001; P002; P003; P004; P005; P006; P007; P008; P009; P010 (wastewaters); P011 (wastewaters); P012 (wastewaters); P014; P015; P016; P017; P018; P020; P022; P023; P024; P026; P027; P028; P031; P033; P034; P036 (wastewaters); P037; P038 (wastewaters); P042; P045; P046; P047; P048; P049; P050; P051; P054; P056; P057; P058; P059; P060; P064; P065 (wastewaters); P066; P067; P068; P069; P070; P072; P073; P075; P076; P077; P078; P081; P082; P084; P088; P092 (wastewaters); P093; P095; P096; P101; P102; P103; P105; P108; P110; P112; P113; P114; P115; P116; P118; P119; P120; P122; and P123; and the wastes specified in 40 CFR 261.33(f) as EPA Hazardous Waste Numbers U001; U002; U003; U004; U005; U006; U007; U008; U009; U010; U011; U012; U014; U015; U016; U017; U018; U019; U020; U021; U022; U023; U024; U025; U026; U027; U029; U030; U031; U032; U033; U034; U035; U036; U037; U038; U039; U041; U042; U043; U044; U045; U046; U047; U048; U049; U050; U051; U052; U053; U055; U056; U057; U059; U060; U061; U062; U063; U064; U066;

U067; U068; U070; U071; U072; U073; U074; U075; U076; U077; U078; U079; U080; U081; U082; U083; U084; U085; U086; U089; U090; U091; U092; U093; U094; U095; U096; U097; U098; U099; U101; U103; U105; U106; U108; U109; U110; U111; U112; U113; U114; U115; U116; U117; U118; U119; U120; U121; U122; U123; U124; U125; U126; U127; U128; U129; U130; U131; U132; U133; U134; U135; U136 (wastewaters); U137; U138; U140; U141; U142; U143; U144; U145; U146; U147; U148; U149; U150; U151 (wastewaters); U152; U153; U154; U155; U156; U157; U158; U159; U160; U161; U162; U163; U164; U165; U166; U167; U168; U169; U170; U171; U172; U173; U174; U176; U177; U178; U179; U180; U181; U182; U183; U184; U185; U186; U187; U188; U189; U191; U192; U193; U194; U196; U197; U200; U201; U202; U203; U204; U205; U206; U207; U208; U209; U210; U211; U213; U214; U215; U216; U217; U218; U219; U220; U222; U225; U226; U227; U228; U234; U236; U237; U238; U239; U240; U243; U244; U246; U247; U248; U249; and the following wastes identified as hazardous based on a characteristic alone: D001; D002, D003, D004 (wastewaters), D005, D006; D007; D008 (except for lead materials stored before secondary smelting), D009 (wastewaters), D010, D011, D012, D013, D014, D015, D016, and D017 are prohibited from land disposal.

(b) Effective November 8, 1990, the following wastes specified in 40 CFR 261.32 as EPA Hazardous Waste Numbers K048 (nonwastewaters), K049 (nonwastewaters), K050 (nonwastewaters), K051 (nonwastewaters), and K052 (nonwastewaters) are prohibited from land disposal.

(c) Effective May 8, 1992, the following waste specified in 40 CFR 261.31 as EPA Hazardous Waste Numbers F039 (nonwastewaters); the wastes specified in 40 CFR 261.32 as EPA Hazardous Waste Number K031 (nonwastewaters); K084 (nonwastewaters); K101 (nonwastewaters); K102 (nonwastewaters); K106 (nonwastewaters); the wastes specified in 40 CFR 261.33(e) as EPA Hazardous Waste Numbers P010 (nonwastewaters); P011 (nonwastewaters); P012 (nonwastewaters); P036 (nonwastewaters); P038 (nonwastewaters); P065 (nonwastewaters); P087; and P092 (nonwastewaters); the wastes specified in 40 CFR 261.33(f) as EPA Hazardous Waste Numbers U136 (nonwastewaters); and U151 (nonwastewaters); the following wastes identified as hazardous based on a characteristic alone: D004 (nonwastewaters); and D009 (nonwastewaters); inorganic solid debris as defined in 40 CFR 268.2(g) (which also applies to chromium refractory bricks carrying the EPA Hazardous Waste Numbers K048-K052); and RCRA hazardous wastes that contain naturally occurring radioactive materials are prohibited from land disposal.

(d) Effective May 8, 1992, hazardous wastes listed in 40 CFR 268.10, 268.11, and 268.12 that are mixed radioactive/hazardous wastes, and soil or debris contaminated with hazardous wastes listed in 40 CFR 268.10, 268.11, and 268.12 that are mixed radioactive/hazardous wastes, are prohibited from land disposal.

(e) Subject to applicable prohibitions in Secs. 268.30, 268.31, and 268.32, contaminated soil and debris are prohibited from land disposal as follows:

(1) Effective May 8, 1994, debris that is contaminated with wastes listed in 40 CFR 268.12, and debris that is contaminated with any characteristic waste for which treatment standards are established in subpart D of this part, are prohibited from land disposal.

(2) Effective May 8, 1994, mixed radioactive hazardous debris that is contaminated with wastes listed in 40 CFR 268.12 and mixed radioactive hazardous debris that is contaminated with any characteristic waste for which treatment standards are established in subpart D of this part, are prohibited from land disposal.

(3) Paragraphs (e) (1) and (2) of this section shall not apply where the generator has failed to make a good-faith effort to locate treatment capacity suitable for its waste, has not utilized such capacity as it has found to be available, or has failed to file a report as

required by 40 CFR 268.5(g) by August 12, 1993 or within 90 days after the hazardous waste is generated (whichever is later) describing the generator's efforts to locate treatment capacity. Where paragraphs (e) (1) and (2) of this section do not apply, all wastes described in these paragraphs are prohibited from land disposal effective May 8, 1993.

(4) Effective May 8, 1993, hazardous soil contaminated with wastes specified in this section having treatment standards in subpart D of this part based on incineration, mercury retorting or vitrification, and soils contaminated with hazardous wastes listed in 40 CFR 268.10, 268.11 and 268.12 that are mixed radioactive hazardous wastes, are prohibited from land disposal.

(5) When used in paragraphs (e) (1) and (2) of this section, debris is defined as follows:

(i) Debris as defined in 40 CFR 268.2(g); or

(ii) Nonfriable inorganic solids that are incapable of passing through a 9.5 mm standard sieve that require cutting, or crushing and grinding in mechanical sizing equipment prior to stabilization, limited to the following inorganic or metal materials:

(A) Metal slags (either dross or scoria).

(B) Glassified slag.

(C) Glass.

(D) Concrete (excluding cementitious or pozzolanic stabilized hazardous wastes).

(E) Masonry and refractory bricks.

(F) Metal cans, containers, drums, or tanks.

(G) Metal nuts, bolts, pipes, pumps, valves, appliances, or industrial equipment.

(H) Scrap metal as defined in 40 CFR 261.1(c)(6).

(f) Between May 8, 1990 and August 8, 1990, the wastes included in paragraph (a) of this section may be disposed of in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in Sec. 268.5(h)(2).

(g) Between May 8, 1990 and November 8, 1990, wastes included in paragraph (b) of this section may be disposed of in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in Sec. 268.5(h)(2).

(h) Between May 8, 1990, and May 8, 1992, wastes included in paragraphs (c), (d), and (e) of this section may be disposed of in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in Sec. 268.5(h)(2).

(i) The requirements of paragraphs (a), (b), (c), (d), and (e) of this section do not apply if:

(1) The wastes meet the applicable standards specified in subpart D of this part;

(2) Persons have been granted an exemption from a prohibition pursuant to a petition under Sec. 268.6, with respect to those wastes and units covered by the petition;

(3) The wastes meet the applicable alternate standards established pursuant to a petition granted under Sec. 268.44;

(4) Persons have been granted an extension to the effective date of a prohibition pursuant to Sec. 268.5, with respect to these wastes covered by the extension.

(j) To determine whether a hazardous waste listed in Sec. 268.10, 268.11, and 268.12 exceeds the applicable treatment standards specified in Secs. 268.41 and 268.43, the initial generator must test a representative sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable subpart D levels, the waste is prohibited from land disposal, and all requirements of part 268 are applicable, except as otherwise specified.

(k) Effective May 8, 1993, D008 lead materials stored before secondary smelting are prohibited from land disposal. On or before March 1, 1993, the owner or operator of each secondary lead smelting facility shall submit to EPA the following: A binding contractual commitment to construct or otherwise provide capacity for storing such D008 wastes prior to smelting which complies with all applicable storage standards; documentation that the capacity to be provided will be sufficient to manage the entire quantity of such D008 wastes; and a detailed schedule for providing such capacity. Failure by a facility to submit such documentation shall render such D008 managed by that facility prohibited from land disposal effective March 1, 1993. In addition, no later than July 27, 1992 the owner or operator of each facility must place in the facility record documentation of the manner and location in which such wastes will be managed pending completion of such capacity, demonstrating that such management capacity will be adequate and complies with all applicable subtitle C requirements.

[55 FR 22688, June 1, 1990, as amended at 56 FR 3878, Jan. 31, 1991; 57 FR 20770, May 15, 1992; 57 FR 28632, June 26, 1992; 58 FR 28510, May 14, 1993]

Effective Date Note: At 62 FR 26022, May 12, 1997, Sec. 268.35 was removed and reserved, effective Aug. 11, 1997.

Sec. 268.36 Waste specific prohibitions--newly listed wastes.

(a) Effective November 9, 1992, the wastes specified in 40 CFR 261.32 as EPA Hazardous Waste Numbers K107, K108, K109, K110, K111, K112, K117, K118, K123, K124, K125, K126, K131, K132, and K136; and the wastes specified in 40 CFR 261.33(f) as EPA Hazardous Waste numbers U328, U353, and U359 are prohibited from land disposal.

(b) Effective June 30, 1993, the wastes specified in 40 CFR 261.31 as EPA Hazardous Waste Numbers F037 and F038 that are not generated from surface impoundment cleanouts or closures are prohibited from land disposal.

(c) Effective June 30, 1994, the wastes specified in 40 CFR 261.31 as EPA Hazardous Waste Numbers F037 and F038 that are generated from surface impoundment cleanouts or closures are prohibited from land disposal.

(d) Effective June 30, 1994, radioactive wastes that are mixed with hazardous wastes specified in 40 CFR 261.31 as EPA Hazardous Waste Numbers F037 and F038; the wastes specified in 40 CFR 261.32 as EPA Hazardous Waste Numbers K107, K108, K109, K110, K111, K112, K117, K118, K123, K124, K125, K126 K131, K132, and K136; or the wastes specified

in 40 CFR 261.33(f) as EPA Hazardous Waste Numbers U328, U353, and U359 are prohibited from land disposal.

(e) Effective June 30, 1994, debris contaminated with hazardous wastes specified in 40 CFR 261.31 as EPA Hazardous Waste Numbers F037 and F038; the wastes specified in 40 CFR 261.32 as EPA Hazardous Waste Numbers K107, K108, K109, K110, K111, K112, K117, K118, K123, K124, K125, K126 K131, K132, and K136; or the wastes specified in 40 CFR 261.33(f) as EPA Hazardous Waste Numbers U328, U353, and U359; and which is not contaminated with any other waste already subject to a prohibition are prohibited from land disposal.

(f) Between June 30, 1992 and June 30, 1993, the wastes included in paragraph (b) of this section may be disposed of in a landfill, only if such unit is in compliance with the requirements specified in Sec. 268.5(h)(2), and may be generated in and disposed of in a surface impoundment only if such unit is in compliance with either Sec. 268.5(h)(2) or Sec. 268.14.

(g) Between June 30, 1992 and June 30, 1994, the wastes included in paragraphs (d) and (e) of this section may be disposed of in a landfill only if such unit is in compliance with the requirements specified in Sec. 268.5(h)(2), and may be generated in and disposed of in a surface impoundment only if such unit is in compliance with either Sec. 268.5(h)(2) or Sec. 268.14.

(h) The requirements of paragraphs (a), (b), (c), (d), and (e) of this section do not apply if:

(1) The wastes meet the applicable standards specified in subpart D of this part;

(2) Persons have been granted an exemption from a prohibition pursuant to a petition under Sec. 268.6, with respect to those wastes and units covered by the petition;

(3) The wastes meet the applicable alternate standards established pursuant to a petition granted under Sec. 268.44;

(4) Persons have been granted an extension to the effective date of a prohibition pursuant to Sec. 268.5, with respect to the wastes covered by the extension.

(i) To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in Secs. 268.41 and 268.43, the initial generator must test a representative sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable levels in subpart D of this part, the waste is prohibited from land disposal, and all requirements of part 268 are applicable, except as otherwise specified.

[57 FR 37271, Aug. 18, 1992]

Effective Date Note: At 62 FR 26022, May 12, 1997, Sec. 268.36 was removed and reserved, effective Aug. 11, 1997.

Sec. 268.37 Waste specific prohibitions--ignitable and corrosive characteristic wastes whose treatment standards were vacated.

(a) Effective August 9, 1993, the wastes specified in 40 CFR 261.21 as D001 (and is not in the High TOC Ignitable Liquids Subcategory), and specified in Sec. 261.22 as D002, that are managed in systems other than those whose discharge is regulated under the Clean Water

Act (CWA), or that inject in Class I deep wells regulated under the Safe Drinking Water Act (SDWA), or that are zero dischargers that engage in CWA-equivalent treatment before ultimate land disposal, are prohibited from land disposal. CWA-equivalent treatment means biological treatment for organics, alkaline chlorination or ferrous sulfate precipitation for cyanide, precipitation/sedimentation for metals, reduction of hexavalent chromium, or other treatment technology that can be demonstrated to perform equally or greater than these technologies.

(b) Effective February 10, 1994, the wastes specified in 40 CFR 261.21 as D001 (and is not in the High TOC Ignitable Liquids Subcategory), and specified in Sec. 261.22 as D002, that are managed in systems defined in 40 CFR 144.6(e) and 146.6(e) as Class V injection wells, that do not engage in CWA-equivalent treatment before injection, are prohibited from land disposal.

[58 FR 29885, May 24, 1993]

Sec. 268.38 Waste specific prohibitions--newly identified organic toxicity characteristic wastes and newly listed coke by-product and chlorotoluene production wastes.

(a) Effective December 19, 1994, the wastes specified in 40 CFR 261.32 as EPA Hazardous Waste numbers K141, K142, K143, K144, K145, K147, K148, K149, K150, and K151 are prohibited from land disposal. In addition, debris contaminated with EPA Hazardous Waste numbers F037, F038, K107-K112, K117, K118, K123-K126, K131, K132, K136, U328, U353, U359, and soil and debris contaminated with D012-D043, K141-K145, and K147-K151 are prohibited from land disposal. The following wastes that are specified in 40 CFR 261.24, Table 1 as EPA Hazardous Waste numbers: D012, D013, D014, D015, D016, D017, D018, D019, D020, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D031, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043 that are not radioactive, or that are managed in systems other than those whose discharge is regulated under the Clean Water Act (CWA), or that are zero dischargers that do not engage in CWA-equivalent treatment before ultimate land disposal, or that are injected in Class I deep wells regulated under the Safe Drinking Water Act (SDWA), are prohibited from land disposal. CWA-equivalent treatment means biological treatment for organics, alkaline chlorination or ferrous sulfate precipitation for cyanide, precipitation/ sedimentation for metals, reduction of hexavalent chromium, or other treatment technology that can be demonstrated to perform equally or better than these technologies.

(b) On September 19, 1996, radioactive wastes that are mixed with D018-D043 that are managed in systems other than those whose discharge is regulated under the Clean Water Act (CWA), or that inject in Class I deep wells regulated under the Safe Drinking Water Act (SDWA), or that are zero dischargers that engage in CWA-equivalent treatment before ultimate land disposal, are prohibited from land disposal. CWA-equivalent treatment means biological treatment for organics, alkaline chlorination or ferrous sulfate precipitation for cyanide, precipitation/ sedimentation for metals, reduction of hexavalent chromium, or other treatment technology that can be demonstrated to perform equally or greater than these technologies. Radioactive wastes mixed with K141-K145, and K147-K151 are also prohibited from land disposal. In addition, soil and debris contaminated with these radioactive mixed wastes are prohibited from land disposal.

(c) Between December 19, 1994 and September 19, 1996, the wastes included in paragraphs (b) of this section may be disposed in a landfill or surface impoundment, only if such unit is in compliance with the requirements specified in Sec. 268.5(h)(2) of this Part.

(d) The requirements of paragraphs (a), (b), and (c) of this section do not apply if:

(1) The wastes meet the applicable treatment standards specified in Subpart D of this part;

(2) Persons have been granted an exemption from a prohibition pursuant to a petition under Sec. 268.6, with respect to those wastes and units covered by the petition;

(3) The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under Sec. 268.44;

(4) Persons have been granted an extension to the effective date of a prohibition pursuant to Sec. 268.5, with respect to these wastes covered by the extension.

(e) To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in Sec. 268.40, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable Subpart D levels, the waste is prohibited from land disposal, and all requirements of part 268 are applicable, except as otherwise specified.

[59 FR 48045, Sept. 19, 1995]

Sec. 268.39 Waste specific prohibitions--spent aluminum potliners; reactive; and carbamate wastes.

(a) On July 8, 1996, the wastes specified in 40 CFR 261.32 as EPA Hazardous Waste numbers K156-K159, and K161; and in 40 CFR 261.33 as EPA Hazardous Waste numbers P127, P128, P185, P188-P192, P194, P196-P199, P201-P205, U271, U278-U280, U364, U367, U372, U373, U387, U389, U394, U395, U404, and U409-U411 are prohibited from land disposal. In addition, soil and debris contaminated with these wastes are prohibited from land disposal.

(b) On July 8, 1996, the wastes identified in 40 CFR 261.23 as D003 that are managed in systems other than those whose discharge is regulated under the Clean Water Act (CWA), or that inject in Class I deep wells regulated under the Safe Drinking Water Act (SDWA), or that are zero dischargers that engage in CWA-equivalent treatment before ultimate land disposal, are prohibited from land disposal. This prohibition does not apply to unexploded ordnance and other explosive devices which have been the subject of an emergency response. (Such D003 wastes are prohibited unless they meet the treatment standard of DEACT before land disposal (see Sec. 268.40)).

(c) On July 8, 1997, the wastes specified in 40 CFR 261.32 as EPA Hazardous Waste number K088 are prohibited from land disposal. In addition, soil and debris contaminated with these wastes are prohibited from land disposal on July 8, 1997.

(d) On April 8, 1998, radioactive wastes mixed with K088, K156-K159, K161, P127, P128, P185, P188-P192, P194, P196-P199, P201-P205, U271, U278-U280, U364, U367, U372, U373, U387, U389, U394, U395, U404, and U409-U411 are prohibited from land disposal. In addition, soil and debris contaminated with these radioactive mixed wastes are prohibited from land disposal.

(e) Between July 8, 1996, and April 8, 1998, the wastes included in paragraphs (a), (c), and (d) of this section may be disposed in a landfill or surface impoundment, only if such unit is in compliance with the requirements specified in Sec. 268.5(h)(2).

(f) The requirements of paragraphs (a), (b), (c), and (d) of this section do not apply if:

(1) The wastes meet the applicable treatment standards specified in Subpart D of this part;

(2) Persons have been granted an exemption from a prohibition pursuant to a petition under Sec. 268.6, with respect to those wastes and units covered by the petition;

(3) The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under Sec. 268.44;

(4) Persons have been granted an extension to the effective date of a prohibition pursuant to Sec. 268.5, with respect to these wastes covered by the extension.

(g) To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in Sec. 268.40, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable Subpart D levels, the waste is prohibited from land disposal, and all requirements of this part 268 are applicable, except as otherwise specified.

[61 FR 15663, Apr. 8, 1996, as amended at 61 FR 33683, June 28, 1996; 62 FR 1997, Jan. 14, 1997; 62 FR 32979, June 17, 1997]

Subpart D--Treatment Standards

Sec. 268.40 Applicability of treatment standards.

(a) A prohibited waste identified in the table ``Treatment Standards for Hazardous Wastes'' may be land disposed only if it meets the requirements found in the table. For each waste, the table identifies one of three types of treatment standard requirements:

(1) All hazardous constituents in the waste or in the treatment residue must be at or below the values found in the table for that waste (``total waste standards''); or

(2) The hazardous constituents in the extract of the waste or in the extract of the treatment residue must be at or below the values found in the table (``waste extract standards''); or

(3) The waste must be treated using the technology specified in the table (``technology standard''), which are described in detail in Sec. 268.42, Table 1--Technology Codes and Description of Technology- Based Standards.

(b) For wastewaters, compliance with concentration level standards is based on maximums for any one day, except for D004 through D011 wastes for which the previously promulgated treatment standards based on grab samples remain in effect. For all nonwastewaters, compliance with concentration level standards is based on grab sampling. For wastes covered by the waste extract standards, the test Method 1311, the Toxicity Characteristic Leaching Procedure found in ``Test Methods for Evaluating Solid Waste, Physical/Chemical Methods'', EPA Publication SW-846, as incorporated by reference in Sec. 260.11, must be used to measure compliance. An exception is made for D004 and D008, for which either of two test methods may be used: Method 1311, or Method 1310, the Extraction Procedure Toxicity Test. For wastes covered by a technology standard, the wastes may be land disposed after being treated using that specified technology or an equivalent treatment technology approved by the Administrator under the procedures set forth in Sec. 268.42(b).

(c) When wastes with differing treatment standards for a constituent of concern are combined for purposes of treatment, the treatment residue must meet the lowest treatment standard for the constituent of concern.

(d) Notwithstanding the prohibitions specified in paragraph (a) of this section, treatment and disposal facilities may demonstrate (and certify pursuant to 40 CFR 268.7(b)(5)) compliance with the treatment standards for organic constituents specified by a footnote in the table ``Treatment Standards for Hazardous Wastes'' in this section, provided the following conditions are satisfied:

(1) The treatment standards for the organic constituents were established based on incineration in units operated in accordance with the technical requirements of 40 CFR part 264, subpart O, or based on combustion in fuel substitution units operating in accordance with applicable technical requirements;

(2) The treatment or disposal facility has used the methods referenced in paragraph (d)(1) of this section to treat the organic constituents; and

(3) The treatment or disposal facility may demonstrate compliance with organic constituents if good-faith analytical efforts achieve detection limits for the regulated organic constituents that do not exceed the treatment standards specified in this section by an order of magnitude.

(e) For characteristic wastes (D001-D003, and D012-D043) that are subject to treatment standards in the following table ``Treatment Standards for Hazardous Wastes,'' all underlying hazardous constituents (as defined in Sec. 268.2(i)) must meet Universal Treatment Standards, found in Sec. 268.48, ``Table UTS,'' prior to land disposal as defined in Sec. 268.2(c) of this part.

(f) The treatment standards for F001-F005 nonwastewater constituents carbon disulfide, cyclohexanone, and/or methanol apply to wastes which contain only one, two, or three of these constituents. Compliance is measured for these constituents in the waste extract from test Method 1311, the Toxicity Characteristic Leaching Procedure found in ``Test Methods for Evaluating Solid Waste, Physical/Chemical Methods'', EPA Publication SW-846, as incorporated by reference in Sec. 260.11. If the waste contains any of these three constituents along with any of the other 25 constituents found in F001-F005, then compliance with treatment standards for carbon disulfide, cyclohexanone, and/or methanol are not required.

(g) Between August 26, 1996 and August 26, 1997 the treatment standards for the wastes specified in 40 CFR 261.32 as EPA Hazardous Waste numbers K156-K161; and in 40 CFR 261.33 as EPA Hazardous Waste numbers P127, P128, P185, P188-P192, P194, P196-P199, P201-P205, U271, U277-U280, U364-U367, U372, U373, U375-U379, U381-U387, U389-U396, U400- U404, U407, and U409-U411; and soil contaminated with these wastes; may be satisfied by either meeting the constituent concentrations presented in the table ``Treatment Standards for Hazardous Wastes'' in this section, or by treating the waste by the following technologies: combustion, as defined by the technolgy code CMBST at Sec. 268.42 Table 1, for nonwastewaters; and, biodegradation as definded by the technolgy code BIODG, carbon adsorption as defined by the technology code CARBN, chemical oxidation as defined by the technology code CHOXD, or combustion as defined as technolgy code CMBST at Sec. 268.42 Table 1, for wastewaters.

[59 FR 48046, Sept. 19, 1994, as amended by 60 FR 245, Jan. 3, 1995; 61 FR 15600, 15662, 15663, Apr. 8, 1996; 61 FR 33683, June 28, 1996; 61 FR 43927, Aug. 26, 1996; 62 FR 7504, Feb. 19, 1997; 62 FR 26022, May 12, 1997; 62 FR 32979, June 17, 1997] Effective Date Note: At 62 FR 26022, May 12, 1997, in Sec. 268.40 the Table of Treatment Standards was

amended by adding entries for F032, F034, and F035, and by revising entries for D001 and F024, effective Aug. 11, 1997. The superseded text for the revisions remaining in effect until Aug. 11, 1997 appears in the July 1, 1996 revision of 40 CFR parts 260 to 299.

Sec. 268.41 Treatment standards expressed as concentrations in waste extract.

For the requirements previously found in this section and for treatment standards in Table CCWE--Constituent Concentrations in Waste Extracts, refer to Sec. 268.40.

[59 FR 48103, Sept. 19, 1994]

Sec. 268.42 Treatment standards expressed as specified technologies.

Note: For the requirements previously found in this section in Table 2--Technology-Based Standards By RCRA Waste Code, and Table 3--Technology-Based Standards for Specific Radioactive Hazardous Mixed Waste, refer to Sec. 268.40.

(a) The following wastes in paragraphs (a)(1) and (a)(2) of this section and in the table in Sec. 268.40 ``Treatment Standards for Hazardous Wastes,'' for which standards are expressed as a treatment method rather than a concentration level, must be treated using the technology or technologies specified in paragraphs (a)(1) and (a)(2) and Table 1 of this section.

(1) Liquid hazardous wastes containing polychlorinated biphenyls (PCBs) at concentrations greater than or equal to 50 ppm but less than 500 ppm must be incinerated in accordance with the technical requirements of 40 CFR 761.70 or burned in high efficiency boilers in accordance with the technical requirements of 40 CFR 761.60. Liquid hazardous wastes containing polychlorinated biphenyls (PCBs) at concentrations greater than or equal to 500 ppm must be incinerated in accordance with the technical requirements of 40 CFR 761.70. Thermal treatment under this section must also be in compliance with applicable regulations in parts 264, 265, and 266.

(2) Nonliquid hazardous wastes containing halogenated organic compounds (HOCs) in total concentration greater than or equal to 1,000 mg/kg and liquid HOC-containing wastes that are prohibited under Sec. 268.32(e)(1) of this part must be incinerated in accordance with the requirements of 40 CFR part 264, subpart O, or 40 CFR part 265, subpart O. These treatment standards do not apply where the waste is subject to a part 268, subpart D, treatment standard for a specific HOC (such as a hazardous waste chlorinated solvent for which a treatment standard is established under Sec. 268.41(a)).

(3) A mixture consisting of wastewater, the discharge of which is subject to regulation under either section 402 or section 307(b) of the Clean Water Act, and de minimis losses of materials from manufacturing operations in which these materials are used as raw materials or are produced as products in the manufacturing process, and that meet the criteria of the D001 ignitable liquids containing greater than 10% total organic constituents (TOC) subcategory, is subject to the DEACT treatment standard described in Table 1 of this section. For purposes of this paragraph, de minimis losses include those from normal material handling operations (e.g., spills from the unloading or transfer of materials from bins or other containers, leaks from pipes, valves or other devices used to transfer materials); minor leaks from process equipment, storage tanks, or containers; leaks from well-maintained pump packings and seals; sample purgings; and relief device discharges.

Table 1.--Technology Codes and Description of Technology-Based Standards

Technology code	Description of technology-based standards
ADGAS:	Venting of compressed gases into an absorbing or reacting media (i.e., solid or liquid)--venting can be accomplished through physical release utilizing valves/piping; physical penetration of the container; and/or penetration through detonation.
AMLGM:	Amalgamation of liquid, elemental mercury contaminated with radioactive materials utilizing inorganic reagents such as copper, zinc, nickel, gold, and sulfur that result in a nonliquid, semi-solid amalgam and thereby reducing potential emissions of elemental mercury vapors to the air.
BIODG:	Biodegradation of organics or non-metallic inorganics (i.e., degradable inorganics that contain the elements of phosphorus, nitrogen, and sulfur) in units operated under either aerobic or anaerobic conditions such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals (e.g., Total Organic Carbon can often be used as an indicator parameter for the biodegradation of many organic constituents that cannot be directly analyzed in wastewater residues).
CARBN:	Carbon adsorption (granulated or powdered) of non-metallic inorganics, organo-metallics, and/or organic constituents, operated such that a surrogate compound or indicator parameter has not undergone breakthrough (e.g., Total Organic Carbon can often be used as an indicator parameter for the adsorption of many organic constituents that cannot be directly analyzed in wastewater residues). Breakthrough occurs when the carbon has become saturated with the constituent (or indicator parameter) and substantial change in adsorption rate associated with that constituent occurs.
CHOXD:	Chemical or electrolytic oxidation utilizing the following oxidation reagents (or waste reagents) or combinations of reagents: (1) Hypochlorite (e.g., bleach); (2) chlorine; (3) chlorine dioxide; (4) ozone or UV (ultraviolet light) assisted ozone; (5) peroxides; (6) persulfates; (7) perchlorates; (8) permangantes; and/or (9) other oxidizing reagents of equivalent efficiency, performed in units operated such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals (e.g., Total Organic Carbon can often be used as an indicator parameter for the oxidation of many organic constituents that cannot be directly analyzed in wastewater residues). Chemical oxidation specifically includes what is commonly referred to as alkaline chlorination.
CHRED:	Chemical reduction utilizing the following reducing reagents (or waste reagents) or combinations of reagents: (1) Sulfur dioxide; (2) sodium, potassium, or alkali salts or sulfites, bisulfites, metabisulfites, and polyethylene glycols (e.g., NaPEG and KPEG); (3) sodium hydrosulfide; (4) ferrous salts; and/or (5) other reducing reagents of equivalent efficiency, performed in units operated such that a surrogate compound or indicator

parameter has been substantially reduced in concentration in the residuals (e.g., Total Organic Halogens can often be used as an indicator parameter for the reduction of many halogenated organic constituents that cannot be directly analyzed in wastewater residues). Chemical reduction is commonly used for the reduction of hexavalent chromium to the trivalent state.

CMBST: High temperature organic destruction technologies, such as combustion in incinerators, boilers, or industrial furnaces operated in accordance with the applicable requirements of 40 CFR part 264, subpart O, or 40 CFR part 265, subpart O, or 40 CFR part 266, subpart H, and in other units operated in accordance with applicable technical operating requirements; and certain non-combustive technologies, such as the Catalytic Extraction Process.

DEACT: Deactivation to remove the hazardous characteristics of a waste due to its ignitability, corrosivity, and/or reactivity.

FSUBS: Fuel substitution in units operated in accordance with applicable technical operating requirements.

HLVIT: Vitrification of high level mixed radioactive wastes in units in compliance with all applicable radioactive protection requirements under control of the Nuclear Regulatory Commission.

IMERC: Incineration of wastes containing organics and mercury in units operated in accordance with the technical operating requirements of 40 CFR part 264 subpart 0 and part 265 subpart 0. All wastewater and nonwastewater residues derived from this process must then comply with the corresponding treatment standards per waste code with consideration of any applicable subcategories (e.g., High or Low Mercury Subcategories).

INCIN: Incineration in units operated in accordance with the Technical operating requirements of 40 CFR part 264 subpart 0 and part 265 subpart 0.

LLEXT: Liquid-liquid extraction (often referred to as solvent extraction) of organics from liquid wastes into an immiscible solvent for which the hazardous constituents have a greater solvent affinity, resulting in an extract high in organics that must undergo either incineration, reuse as a fuel, or other recovery/reuse and a raffinate (extracted liquid waste) proportionately low in organics that must undergo further treatment as specified in the standard.

MACRO: Macroencapsulation with surface coating materials such as polymeric organics (e.g., resins and plastics) or with a jacket of inert inorganic materials to substantially reduce surface exposure to potential leaching media. Macroencapsulation specifically does not include any material that would be classified as a tank or container according to 40 CFR 260.10.

NEUTR: Neutralization with the following reagents (or waste reagents) or combinations of reagents: (1) Acids; (2) bases; or (3) water (including wastewaters) resulting in a pH greater than 2 but less than 12.5 as measured in the aqueous residuals.

NLDBR: No land disposal based on recycling.

POLYM: Formation of complex high-molecular weight solids through polymerization of monomers in high-TOC D001 non-wastewaters which are chemical components in the manufacture of plastics.

PRECP: Chemical precipitation of metals and other inorganics as

insoluble precipitates of oxides, hydroxides, carbonates, sulfides, sulfates, chlorides, flourides, or phosphates. The following reagents (or waste reagents) are typically used alone or in combination: (1) Lime (i.e., containing oxides and/or hydroxides of calcium and/or magnesium; (2) caustic (i.e., sodium and/or potassium hydroxides; (3) soda ash (i.e., sodium carbonate); (4) sodium sulfide; (5) ferric sulfate or ferric chloride; (6) alum; or (7) sodium sulfate. Additional floculating, coagulation or similar reagents/processes that enhance sludge dewatering characteristics are not precluded from use.

RBERY: Thermal recovery of Beryllium.

RCGAS: Recovery/reuse of compressed gases including techniques such as reprocessing of the gases for reuse/resale; filtering/adsorption of impurities; remixing for direct reuse or resale; and use of the gas as a fuel source.

RCORR: Recovery of acids or bases utilizing one or more of the following recovery technologies: (1) Distillation (i.e., thermal concentration); (2) ion exchange; (3) resin or solid adsorption; (4) reverse osmosis; and/or (5) incineration for the recovery of acid--Note: this does not preclude the use of other physical phase separation or concentration techniques such as decantation, filtration (including ultrafiltration), and centrifugation, when used in conjunction with the above listed recovery technologies.

RLEAD: Thermal recovery of lead in secondary lead smelters.

RMERC: Retorting or roasting in a thermal processing unit capable of volatilizing mercury and subsequently condensing the volatilized mercury for recovery. The retorting or roasting unit (or facility) must be subject to one or more of the following: (a) a National Emissions Standard for Hazardous Air Pollutants (NESHAP) for mercury; (b) a Best Available Control Technology (BACT) or a Lowest Achievable Emission Rate (LAER) standard for mercury imposed pursuant to a Prevention of Significant Deterioration (PSD) permit; or (c) a state permit that establishes emission limitations (within meaning of section 302 of the Clean Air Act) for mercury. All wastewater and nonwastewater residues derived from this process must then comply with the corresponding treatment standards per waste code with consideration of any applicable subcategories (e.g., High or Low Mercury Subcategories).

RMETL: Recovery of metals or inorganics utilizing one or more of the following direct physical/removal technologies: (1) Ion exchange; (2) resin or solid (i.e., zeolites) adsorption; (3) reverse osmosis; (4) chelation/solvent extraction; (5) freeze crystalization; (6) ultrafiltration and/or (7) simple precipitation (i.e., crystalization)--Note: This does not preclude the use of other physical phase separation or concentration techniques such as decantation, filtration (including ultrafiltration), and centrifugation, when used in conjunction with the above listed recovery technologies.

RORGS: Recovery of organics utilizing one or more of the following technologies: (1) Distillation; (2) thin film evaporation; (3) steam stripping; (4) carbon adsorption; (5) critical fluid extraction; (6) liquid-liquid extraction; (7) precipitation/crystalization (including freeze crystallization); or (8) chemical phase separation techniques (i.e., addition of acids, bases, demulsifiers, or similar

chemicals);-- Note: this does not preclude the use of other physical phase separation techniques such as a decantation, filtration (including ultrafiltration), and centrifugation, when used in conjunction with the above listed recovery technologies.

RTHRM: Thermal recovery of metals or inorganics from nonwastewaters in units identified as industrial furnaces according to 40 CFR 260.10 (1), (6), (7), (11), and (12) under the definition of ``industrial furnaces''.

RZINC: Resmelting in high temperature metal recovery units for the purpose of recovery of zinc.

STABL: Stabilization with the following reagents (or waste reagents) or combinations of reagents: (1) Portland cement; or (2) lime/pozzolans (e.g., fly ash and cement kiln dust)--this does not preclude the addition of reagents (e.g., iron salts, silicates, and clays) designed to enhance the set/cure time and/or compressive strength, or to overall reduce the leachability of the metal or inorganic.

SSTRP: Steam stripping of organics from liquid wastes utilizing direct application of steam to the wastes operated such that liquid and vapor flow rates, as well as, temperature and pressure ranges have been optimized, monitored, and maintained. These operating parameters are dependent upon the design parameters of the unit such as, the number of separation stages and the internal column design. Thus, resulting in a condensed extract high in organics that must undergo either incineration, reuse as a fuel, or other recovery/reuse and an extracted wastewater that must undergo further treatment as specified in the standard.

WETOX: Wet air oxidation performed in units operated such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals (e.g., Total Organic Carbon can often be used as an indicator parameter for the oxidation of many organic constituents that cannot be directly analyzed in wastewater residues).

WTRRX: Controlled reaction with water for highly reactive inorganic or organic chemicals with precautionary controls for protection of workers from potential violent reactions as well as precautionary controls for potential emissions of toxic/ignitable levels of gases released during the reaction.

Note 1: When a combination of these technologies (i.e., a treatment train) is specified as a single treatment standard, the order of application is specified in Sec. 268.42, Table 2 by indicating the five letter technology code that must be applied first, then the designation ``fb.'' (an abbreviation for ``followed by''), then the five letter technology code for the technology that must be applied next, and so on.

Note 2: When more than one technology (or treatment train) are specified as alternative treatment standards, the five letter technology codes (or the treatment trains) are separated by a semicolon (;) with the last technology preceded by the word ``OR''. This indicates that any one of these BDAT technologies or treatment trains can be used for compliance with the standard.

(b) Any person may submit an application to the Administrator demonstrating that an alternative treatment method can achieve a measure of performance equivalent to that achieved by methods specified in paragraphs (a), (c), and (d) of this section for wastes or specified in Table 1 of Sec. 268.45 for hazardous debris. The applicant must submit information demonstrating that his treatment method is in compliance with federal, state, and local

requirements and is protective of human health and the environment. On the basis of such information and any other available information, the Administrator may approve the use of the alternative treatment method if he finds that the alternative treatment method provides a measure of performance equivalent to that achieved by methods specified in paragraphs (a), (c), and (d) of this section for wastes or in Table 1 of Sec. 268.45 for hazardous debris. Any approval must be stated in writing and may contain such provisions and conditions as the Administrator deems appropriate. The person to whom such approval is issued must comply with all limitations contained in such a determination.

(c) As an alternative to the otherwise applicable subpart D treatment standards, lab packs are eligible for land disposal provided the following requirements are met:

(1) The lab packs comply with the applicable provisions of 40 CFR 264.316 and 40 CFR 265.316;

(2) The lab pack does not contain any of the wastes listed in Appendix IV to part 268;

(3) The lab packs are incinerated in accordance with the requirements of 40 CFR part 264, subpart O or 40 CFR part 265, subpart O; and

(4) Any incinerator residues from lab packs containing D004, D005, D006, D007, D008, D010, and D011 are treated in compliance with the applicable treatment standards specified for such wastes in subpart D of this part.

(d) Radioactive hazardous mixed wastes are subject to the treatment standards in Sec. 268.40. Where treatment standards are specified for radioactive mixed wastes in the Table of Treatment Standards, those treatment standards will govern. Where there is no specific treatment standard for radioactive mixed waste, the treatment standard for the hazardous waste (as designated by EPA waste code) applies. Hazardous debris containing radioactive waste is subject to the treatment standards specified in Sec. 268.45.

[51 FR 40642, Nov. 7, 1986, as amended at 52 FR 25790, July 8, 1987; 55 FR 22692, June 1, 1990; 56 FR 3884, Jan. 31, 1991; 57 FR 8089, Mar. 6, 1992; 57 FR 37273, Aug. 18, 1992; 58 FR 29885, May 24, 1993; 59 FR 31552, June 20, 1994; 59 FR 48103, Sept. 19, 1994; 60 FR 302, Jan. 3, 1995; 61 FR 15654, Apr. 8, 1996; 62 FR 26025, May 12, 1997]

Effective Date Note: At 62 FR 26025, May 12, 1997, Table 1 in Sec. 268.42 was amended by adding the entry for ``POLYM'', effective Aug. 11, 1997.

Sec. 268.43 Treatment standards expressed as waste concentrations.

For the requirements previously found in this section and for treatment standards in Table CCW--Constituent Concentrations in Wastes, refer to Sec. 268.40.

[59 FR 48103, Sept. 19, 1994]

Sec. 268.44 Variance from a treatment standard.

(a) Where the treatment standard is expressed as a concentration in a waste or waste extract and a waste cannot be treated to the specified level, or where the treatment technology is not appropriate to the waste, the generator or treatment facility may petition the Administrator for a variance from the treatment standard. The petitioner must demonstrate that because the physical or chemical properties of the waste differs significantly from

wastes analyzed in developing the treatment standard, the waste cannot be treated to specified levels or by the specified methods.

(b) Each petition must be submitted in accordance with the procedures in Sec. 260.20.

(c) Each petition must include the following statement signed by the petitioner or an authorized representative:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this petition and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that these are significant penalties for submitting false information, including the possibility of fine and imprisonment.

(d) After receiving a petition for variance from a treatment standard, the Administrator may request any additional information or samples which he may require to evaluate the petition. Additional copies of the complete petition may be requested as needed to send to affected states and Regional Offices.

(e) The Administrator will give public notice in the Federal Register of the intent to approve or deny a petition and provide an opportunity for public comment. The final decision on a variance from a treatment standard will be published in the Federal Register.

(f) A generator, treatment facility, or disposal facility that is managing a waste covered by a variance from the treatment standards must comply with the waste analysis requirements for restricted wastes found under Sec. 268.7.

(g) During the petition review process, the applicant is required to comply with all restrictions on land disposal under this part once the effective date for the waste has been reached.

(h) Where the treatment standard is expressed as a concentration in a waste or waste extract and a waste generated under conditions specific to only one site cannot be treated to the specified level, or where the treatment technology is not appropriate to the waste, the generator or treatment facility may apply to the Administrator, or his delegated representative, for a site-specific variance from a treatment standard. The applicant for a site-specific variance must demonstrate that because the physical or chemical properties of the waste differs significantly from the waste analyzed in developing the treatment standard, the waste cannot be treated to specified levels or by the specified methods.

(i) Each application for a site-specific variance from a treatment standard must include the information in Sec. 260.20(b)(1)-(4);

(j) After receiving an application for a site-specific variance from a treatment standard, the Assistant Administrator, or his delegated representative, may request any additional information or samples which may be required to evaluate the application.

(k) A generator, treatment facility, or disposal facility that is managing a waste covered by a site-specific variance from a treatment standard must comply with the waste analysis requirements for restricted wastes found under Sec. 268.7.

(l) During the application review process, the applicant for a site-specific variance must comply with all restrictions on land disposal under this part once the effective date for the waste has been reached.

(m)--(n) [Reserved]

(o) The following facilities are excluded from the treatment standards under Sec. 268.40, and are subject to the following constituent concentrations:

Table--Wastes Excluded From the Treatment Standards Under Sec. 268.40

Facility name[1] and address	Waste code	See also	Regulated hazardous constituent	Wastewaters Concentration (mg/l)	Notes	Nonwastewaters Concentration (mg/kg)	Notes
Craftsman Plating and Tinning, Corp., Chicago, IL.	F006	Table CCWE in 268.40	Cyanides (Total)..	1.2	(2)	1800	(4)
			Cyanides (Amenable).	.86	(2)and(3)	30	(4)
			Cadmium.....	1.6	.....	NA	.....
			Chromium.....	.32	.....	NA	.....
			Lead.....	.040	.....	NA	.....
			Nickel.....	.44	.....	NA	.....
Northwestern Plating Works, Inc., Chicago, IL.	F006	Table CCWE in 268.40	Cyanides (Total)....	1.2	(2)and(3)	970	(4)
			Cyanides (Amenable).	.86	(2)	30	(4)
			Cadmium.....	1.6	.....	NA	.....
			Chromium.....	.32	.....	NA	.....
			Lead.....	.040	.....	NA	.....
			Nickel.....	.44	.....	NA	.....

(1)--A facility may certify compliance with these treatment standards according to provisions in 40 CFR 268.7.
(2)--Cyanide Wastewater Standards for F006 are based on analysis of composite samples.
(3)--These facilities must comply with 0.86 mg/l for amenable cyanides in the wastewater exiting the alkaline chlorination system. These facilities must also comply with 40 CFR Sec. 268.7.a.4 for appropriate monitoring frequency consistent with the facilities' waste analysis plan.
(4)--Cyanide nonwastewaters are analyzed using SW-846 Method 9010 or 9012, sample size 10 grams, distillation time, 1 hour and 15 minutes.

Note: NA means Not Applicable.

(p) F037 and F038 wastes generated by the closure of the Surge Pond at the CITGO Petroleum Lake Charles Refinery site are excluded from the treatment standards under Sec. 268.40 Table--Treatment Standards for Hazardous Wastes, and are subject to the following conditions:

(1) The hazardous constituents in the treated sludge (or in the TCLP extract of the treated sludge where indicated) must be at or below the concentration values indicated in the following table:

CITGO Alternative LDR Treatment Standards

Regulated Hazardous Constituent	CAS No.	Concentration in mg/kg unless noted as ``mg/l TCLP''
Anthracene	120-12-7	20
Benzene	71-43-2	10
Benz(a)anthracene	56-55-3	19
Benzo(a)pyrene	50-32-8	19
Chrysene	218-01-9	29
Ethylbenzene	100-41-4	39
Naphthalene	91-20-3	120
Phenanthrene	85-01-8	120
Pyrene	129-00-0	39
Toluene	108-88-3	33
Xylenes-mixed isomers (sum of o-, m-, and p- xylene concentrations).	1330-20-7	150
Chromium (total)	7440-47-3	0.86 mg/l TCLP
Cyanides (total)	57-12-5	590
Nickel	7440-02-0	5.0 mg/l TCLP

Note: All standards for nonwastewaters are based on analysis of grab samples.

(2) The proposed sludge treatment system must be operated in accordance with applicable air emission standards specified by:

(i) 40 CFR Part 61--National Emission Standards for Hazardous Air Pollutants (NESHAP), Subpart FF: National Emission Standard for Benzene Waste Operations, Sec. 61.348 Standards: Treatment Processes;
(ii) 40 CFR Parts 264 and 265--Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities, Subpart CC-- Air Emission Standards for Tanks, Surface Impoundments, and Containers (if applicable); and
(iii) Any additional requirements specified by the Louisiana Department of Environmental Quality (LDEQ).

(3) This treatability variance will be valid for a period of 24 months, commencing on the date the Surge Pond closure plan is approved by the State Director. CITGO may petition for additional time if unforeseen delays occur, provided they can demonstrate a good faith effort to complete the remediation.

[51 FR 40642, Nov. 7, 1986, as amended at 52 FR 21017, June 4, 1987; 53 FR 31221, Aug. 17, 1988; 54 FR 36972, Sept. 6, 1989; 56 FR 12355, Mar. 25, 1991; 61 FR 55727, Oct. 28, 1996; 62 FR 26025, May 12, 1997]

Effective Date Note: At 62 FR 26025, May 12, 1997, Sec. 268.44(o) was amended by revising ``Sec. 268.41'' both times it appears in the ``see also'' column of the table to read ``Sec. 268.40'', revising ``Sec. 268.43(a), Table CCW,'' in the introductory text to read ``Sec. 268.40,'' and revising ``Sec. 268.43(a)'' in the table heading to read ``Sec. 268.40'', effective Aug. 11, 1997.

Sec. 268.45 Treatment standards for hazardous debris.

(a) Treatment standards. Hazardous debris must be treated prior to land disposal as follows unless EPA determines under Sec. 261.3(e)(2) of this chapter that the debris is no longer contaminated with hazardous waste or the debris is treated to the waste-specific treatment standard provided in this subpart for the waste contaminating the debris:

(1) General. Hazardous debris must be treated for each ``contaminant subject to treatment'' defined by paragraph (b) of this section using the technology or technologies identified in Table 1 of this section.

(2) Characteristic debris. Hazardous debris that exhibits the characteristic of ignitability, corrosivity, or reactivity identified under Secs. 261.21, 261.22, and 261.23 of this chapter, respectively, must be deactivated by treatment using one of the technologies identified in Table 1 of this section.

(3) Mixtures of debris types. The treatment standards of Table 1 in this section must be achieved for each type of debris contained in a mixture of debris types. If an immobilization technology is used in a treatment train, it must be the last treatment technology used.

(4) Mixtures of contaminant types. Debris that is contaminated with two or more contaminants subject to treatment identified under paragraph (b) of this section must be treated for each contaminant using one or more treatment technologies identified in Table 1 of this section. If an immobilization technology is used in a treatment train, it must be the last treatment technology used.

(5) Waste PCBs. Hazardous debris that is also a waste PCB under 40 CFR part 761 is subject to the requirements of either 40 CFR part 761 or the requirements of this section, whichever are more stringent.

(b) Contaminants subject to treatment. Hazardous debris must be treated for each ``contaminant subject to treatment.'' The contaminants subject to treatment must be determined as follows:

(1) Toxicity characteristic debris. The contaminants subject to treatment for debris that exhibits the Toxicity Characteristic (TC) by Sec. 261.24 of this chapter are those EP constituents for which the debris exhibits the TC toxicity characteristic.

(2) Debris contaminated with listed waste. The contaminants subject to treatment for debris that is contaminated with a prohibited listed hazardous waste are those constituents or wastes for which treatment standards are established for the waste under Sec. 268.40.

(3) Cyanide reactive debris. Hazardous debris that is reactive because of cyanide must be treated for cyanide.

(c) Conditioned exclusion of treated debris. Hazardous debris that has been treated using one of the specified extraction or destruction technologies in Table 1 of this section and that does not exhibit a characteristic of hazardous waste identified under subpart C, part 261, of this chapter after treatment is not a hazardous waste and need not be managed in a subtitle C facility. Hazardous debris contaminated with a listed waste that is treated by an immobilization technology specified in Table 1 is a hazardous waste and must be managed in a subtitle C facility.

(d) Treatment residuals--

(1) General requirements. Except as provided by paragraphs (d)(2) and (d)(4) of this section:

(i) Residue from the treatment of hazardous debris must be separated from the treated debris using simple physical or mechanical means; and
(ii) Residue from the treatment of hazardous debris is subject to the waste-specific treatment standards provided by subpart D of this part for the waste contaminating the debris.

(2) Nontoxic debris. Residue from the deactivation of ignitable, corrosive, or reactive characteristic hazardous debris (other than cyanide-reactive) that is not contaminated with a contaminant subject to treatment defined by paragraph (b) of this section, must be deactivated prior to land disposal and is not subject to the waste-specific treatment standards of subpart D of this part.

(3) Cyanide-reactive debris. Residue from the treatment of debris that is reactive because of cyanide must meet the standards for D003 under Sec. 268.43.

(4) Ignitable nonwastewater residue. Ignitable nonwastewater residue containing equal to or greater than 10% total organic carbon is subject to the technology-based standards for D001: ``Ignitable Liquids based on Sec. 261.21(a)(1)" under Sec. 268.42.

(5) Residue from spalling. Layers of debris removed by spalling are hazardous debris that remain subject to the treatment standards of this section.

Table 1.--Alternative Treatment Standards For Hazardous Debris [1]

Technology description	Performance and/or design and operating standard	Contaminant restrictions [2]
A. Extraction Technologies:		
1. Physical Extraction		
a. Abrasive Blasting: Removal of contaminated debris surface layers using water and/or air pressure to propel a solid media (e.g., steel shot, aluminum oxide grit, plastic beads).	Glass, Metal, Plastic, Rubber: Treatment to a clean debris surface.[3]. Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Removal of at least 0.6 cm of the surface layer; treatment to a clean debrissurface.[3]	All Debris: None.
b. Scarification, Grinding, and Planing: Process utilizing striking piston heads, saws, or rotating grinding wheels such that contaminated debris surface layers are removed.	Same as above.....	Same as above.
c. Spalling: Drilling or chipping holes at appropriate locations and depth in the contaminated debris surface and	Same as above.....	Same as above.

applying a tool which exerts a force on the sides of those holes such that the surface layer is removed. The surface layer removed remains hazardous debris subject to the debris treatment standards.		
d. Vibratory Finishing: Process utilizing scrubbing media, flushing fluid, and oscillating energy such that hazardous contaminants or contaminated debris surface layers are removed.[4]	Same as above.....	Same as above.
e. High Pressure Steam and Water Sprays: Application of water or steam sprays of sufficient temperature, pressure, residence time, agitation, surfactants, and detergents to remove hazardous contaminants from debris surfaces or to remove contaminated debris surface layers.	Same as above.....	Same as above.
2. Chemical Extraction		
a. Water Washing and Spraying: Application of water sprays or water baths of sufficient temperature, pressure, residence time, agitation, surfactants, acids, bases, and detergents to remove hazardous contaminants from debris surfaces and surface pores or to remove contaminated debris surface layers.	All Debris: Treatment to a clean debris surface [3]; Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Debris must be no more than 1.2 cm (1/2 inch) in one dimension (i.e., thickness limit,[5] except that this thickness limit may be waived under an ``Equivalent Technology'' approval under Sec. 268.42(b);[8] debris surfaces must be in contact with water solution	Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Contaminant must be soluble to at least 5% by weight in water solution or 5% by weight in emulsion; if debris is contaminated with a dioxin-listed waste,[6] an ``Equivalent Technology'' approval under Sec. 268.42(b) must be obtained.[8]

		for at least 15 minutes	
	b. Liquid Phase Solvent Extraction: Removal of hazardous contaminants from debris surfaces and surface pores by applying a nonaqueous liquid or liquid solution which causes the hazardous contaminants to enter the liquid phase and be flushed away from the debris along with the liquid or liquid solution while using appropriate agitation, temperature, and residence time.[4]	Same as above.....	Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Same as above, except that contaminant must be soluble to at least 5% by weight in the solvent.
	c. Vapor Phase Solvent Extraction: Application of an organic vapor using sufficient agitation, residence time, and temperature to cause hazardous contaminants on contaminated debris surfaces and surface pores to enter the vapor phase and be flushed away with the organic vapor.[4]	Same as above, except that brick, cloth, concrete, paper, pavement, rock and wood surfaces must be in contact with the organic vapor for at least 60 minutes.	Same as above.
	3. Thermal Extraction		
	a. High Temperature Metals Recovery: Application of sufficient heat, residence time, mixing, fluxing agents, and/or carbon in a smelting, melting, or refining furnace to separate metals from debris.	For refining furnaces, treated debris must be separated from treatment residuals using simple physical or mechanical means,[9] and, prior to further treatment, such residuals must meet the waste-specific treatment standards for organic compounds in the waste contaminating the debris.	Debris contaminated with a dioxin-listed waste:[5] Obtain an ``Equivalent Technology'' approval under Sec. 268.42(b).[8]
	b. Thermal Desorption: Heating in an enclosed chamber under either oxidizing or nonoxidizing atmospheres at sufficient	All Debris: Obtain an ``Equivalent Technology'' approval under Sec. 268.42(b);[8]	All Debris: Metals other than mercury.

temperature and residence time to vaporize hazardous contaminants from contaminated surfaces and surface pores and to remove the contaminants from the heating chamber in a gaseous exhaust gas.[7]	treated debris must be separated from treatment residuals using simple physical or mechanical means,[9] and, prior to further treatment, such residue must meet the waste-specific treatment standards for organic compounds in the waste contaminating the debris. Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Debris must be no more than 10 cm (4 inches) in one dimension (i.e., thickness limit),[5] except that this thickness limit may be waived under the ``Equivalent Technology'' approval	
B. Destruction Technologies:		
1. Biological Destruction (Biodegradation): Removal of hazardous contaminants from debris surfaces and surface pores in an aqueous solution and biodegration of organic or nonmetallic inorganic compounds (i.e., inorganics that contain phosphorus, nitrogen, or sulfur) in units operated under either aerobic or anaerobic conditions.	All Debris: Obtain an ``Equivalent Technology'' approval under Sec. 268.42(b);[8] treated debris must be separated from treatment residuals using simple physical or mechanical means,[9] and, prior to further treatment, such residue must meet the waste-specific treatment standards for organic compounds in the waste contaminating the debris.	All Debris: Metal contaminants.

		Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Debris must be no more than 1.2 cm (1/2 inch) in one dimension (i.e., thickness limit),[5] except that this thickness limit may be waived under the ``Equivalent Technology'' approval	
2. Chemical Destruction			
a. Chemical Oxidation: Chemical or electolytic oxidation utilizing the following oxidation reagents (or waste reagents) or combination of reagents--(1) hypochlorite (e.g., bleach); (2) chlorine; (3) chlorine dioxide; (4) ozone or UV (ultraviolet light) assisted ozone; (5) peroxides; (6) persulfates; (7) perchlorates; (8) permanganates; and/or (9) other oxidizing reagents of equivalent destruction efficiency.[4] Chemical oxidation specifically includes what is referred to as alkaline chlorination.	All Debris: Obtain an ``Equivalent Technology'' approval under Sec. 268.42(b);[8] treated debris must be separated from treatment residuals using simple physical or mechanical means,[9] and, prior to further treatment, such residue must meet the waste-specific treatment standards for organic compounds in the waste contaminating the debris. Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Debris must be no more than 1.2 cm (1/2 inch) in one dimension (i.e., thickness limit),[5] except that this thickness limit may be waived under the ``Equivalent Technology'' approval	All Debris: Metal contaminants.	
b. Chemical Reduction: Chemical reaction utilizing the following	Same as above.....	Same as above.	

reducing reagents (or waste reagents) or combination of reagents: (1) sulfur dioxide; (2) sodium, potassium, or alkali salts of sulfites, bisulfites, and metabisulfites, and polyethylene glycols (e.g., NaPEG and KPEG); (3) sodium hydrosulfide; (4) ferrous salts; and/or (5) other reducing reagents of equivalent efficiency.[4]		
3. Thermal Destruction: Treatment in an incinerator operating in accordance with Subpart O of Parts 264 or 265 of this chapter; a boiler or industrial furnace operating in accordance with Subpart H of Part 266 of this chapter, or other thermal treatment unit operated in accordance with Subpart X, Part 264 of this chapter, or Subpart P, Part 265 of this chapter, but excluding for purposes of these debris treatment standards Thermal Desorption units.	Treated debris must be separated from treatment residuals using simple physical or mechanical means,[9] and, prior to further treatment, such residue must meet the waste-specific treatment standards for organic compounds in the waste contaminating the debris.	Brick, Concrete, Glass, Metal, Pavement, Rock, Metal: Metals other than mercury, except that there are no metal restrictions for vitrification. Debris contaminated with a dioxin-listed waste.[6] Obtain an ``Equivalent Technology'' approval under Sec. 268.42(b),[8] except that this requirement does not apply to vitrification.
C. Immobilization Technologies:		
1. Macroencapsulation: Application of surface coating materials such as polymeric organics (e.g., resins and plastics) or use of a jacket of inert inorganic materials to substantially reduce surface exposure to potential leaching media.	Encapsulating material must completely encapsulate debris and be resistant to degradation by the debris and its contaminants and materials into which it may come into contact after placement (leachate, other waste, microbes).	None.
2. Microencapsulation: Stabilization of the	Leachability of the hazardous	None.

debris with the following reagents (or waste reagents) such that the leachability of the hazardous contaminants is reduced: (1) Portland cement; or (2) lime/ pozzolans (e.g., fly ash and cement kiln dust). Reagents (e.g., iron salts, silicates, and clays) may be added to enhance the set/cure time and/or compressive strength, or to reduce the leachability of the hazardous constituents.[5]	contaminants must be reduced.	
3. Sealing: Application of an appropriate material which adheres tightly to the debris surface to avoid exposure of the surface to potential leaching media. When necessary to effectively seal the surface, sealing entails pretreatment of the debris surface to remove foreign matter and to clean and roughen the surface. Sealing materials include epoxy, silicone, and urethane compounds, but paint may not be used as a sealant.	Sealing must avoid exposure of the debris surface to potential leaching media and sealant must be resistent to degradation by the debris and its contaminants and materials into which it may come into contact after placement (leachate, other waste, microbes).	None.

[1] Hazardous debris must be treated by either these standards or the waste-specific treatment standards for the waste contaminating the debris. The treatment standards must be met for each type of debris contained in a mixture of debris types, unless the debris is converted into treatment residue as a result of the treatment process. Debris treatment residuals are subject to the waste-specific treatment standards for the waste contaminating the debris.

[2] Contaminant restriction means that the technology is not BDAT for that contaminant. If debris containing a restricted contaminant is treated by the technology, the contaminant must be subsequently treated by a technology for which it is not restricted in order to be land disposed (and excluded from Subtitle C regulation).

[3] ``Clean debris surface'' means the surface, when viewed without magnification, shall be free of all visible contaminated soil and hazardous waste except that residual staining from soil and waste consisting of light shadows, slight streaks, or minor discolorations, and soil and waste in cracks, crevices, and pits may be present provided that such staining and waste and soil in cracks, crevices, and pits shall be limited to no more than 5% of each square inch of surface area.

[4] Acids, solvents, and chemical reagents may react with some debris and contaminants to form hazardous compounds. For example, acid washing of cyanide-contaminated debris could result in the formation of hydrogen cyanide. Some acids may also react violently with some debris and contaminants, depending on the concentration of the acid and the type of debris and contaminants. Debris treaters should refer to the safety precautions specified in Material Safety Data Sheets for various acids to avoid applying an incompatible acid to a particular debris/contaminant combination. For example, concentrated sulfuric acid may react violently with certain organic compounds, such as acrylonitrile.

[5] If reducing the particle size of debris to meet the treatment standards results in material that no longer meets the 60 mm minimum particle size limit for debris, such material is subject to the waste-specific treatment standards for the waste contaminating the material, unless the debris has been cleaned and separated from contaminated soil and waste prior to size reduction. At a minimum, simple physical or mechanical means must be used to provide such cleaning and separation of nondebris materials to ensure that the debris surface is free of caked soil, waste, or other nondebris material.

[6] Dioxin-listed wastes are EPA Hazardous Waste numbers FO20, FO21, FO22, FO23, FO26, and FO27.

[7] Thermal desorption is distinguished from Thermal Destruction in that the primary purpose of Thermal Desorption is to volatilize contaminants and to remove them from the treatment chamber for subsequent destruction or other treatment.

[8] The demonstration ``Equivalent Technology'' under Sec. 268.42(b) must document that the technology treats contaminants subject to treatment to a level equivalent to that required by the performance and design and operating standards for other technologies in this table such that residual levels of hazardous contaminants will not pose a hazard to human health and the environment absent management controls.

[9] Any soil, waste, and other nondebris material that remains on the debris surface (or remains mixed with the debris) after treatment is considered a treatment residual that must be separated from the debris using, at a minimum, simple physical or mechanical means. Examples of simple physical or mechanical means are vibratory or trommel screening or water washing. The debris surface need not be cleaned to a ``clean debris surface'' as defined in note 3 when separating treated debris from residue; rather, the surface must be free of caked soil, waste, or other nondebris material. Treatment residuals are subject to the waste-specific treatment standards for the waste contaminating the debris.

[57 FR 37277, Aug. 18, 1992, as amended at 59 FR 48103, Sept. 19, 1994]

Sec. 268.46 Alternative treatment standards based on HTMR.

For the treatment standards previously found in this section, refer to Sec. 268.40.

[59 FR 48103, Sept. 19, 1994]

Sec. 268.48 Universal treatment standards.

(a) Table UTS identifies the hazardous constituents, along with the nonwastewater and wastewater treatment standard levels, that are used to regulate most prohibited hazardous wastes with numerical limits. For determining compliance with treatment standards for underlying hazardous constituents as defined in Sec. 268.2(i), these treatment standards may not be exceeded. Compliance with these treatment standards is measured by an analysis of grab samples, unless otherwise noted in the following Table UTS.

Universal Treatment Standards

[Note: NA means not applicable.]

Regulated constituent common name	CAS [1] number	Wastewater standard Concentration in mg/l [2]	Nonwastewater standard Concentration in mg/kg [3] unless noted as ``mg/l TCLP''
I. Organic Constituents:			
A2213 [6]	30558-43-1	0.042	1.4
Acenaphthylene	208-96-8	0.059	3.4
Acenaphthene	83-32-9	0.059	3.4
Acetone	67-64-1	0.28	160
Acetonitrile	75-05-8	5.6	38
Acetophenone	96-86-2	0.010	9.7
2-Acetylaminofluorene	53-96-3	0.059	140
Acrolein	107-02-8	0.29	NA
Acrylamide	79-06-1	19	23
Acrylonitrile	107-13-1	0.24	84
Aldicarb sulfone [6]	1646-88-4	0.056	0.28
Aldrin	309-00-2	0.021	0.066
4-Aminobiphenyl	92-67-1	0.13	NA
Aniline	62-53-3	0.81	14
Anthracene	120-12-7	0.059	3.4
Aramite	140-57-8	0.36	NA
alpha-BHC	319-84-6	0.00014	0.066
beta-BHC	319-85-7	0.00014	0.066
delta-BHC	319-86-8	0.023	0.066
gamma-BHC	58-89-9	0.0017	0.066
Barban [6]	101-27-9	0.056	1.4
Bendiocarb [6]	22781-23-3	0.056	1.4
Bendiocarb phenol [6]	22961-82-6	0.056	1.4
Benomyl [6]	17804-35-2	0.056	1.4
Benzene	71-43-2	0.14	10
Benz(a)anthracene	56-55-3	059	3.4
Benzal chloride	98-87-3	0.055	6.0
Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene).	205-99-2	0.11	6.8
Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluor-anthene).	207-08-9	0.11	6.8
Benzo(g,h,i)perylene	191-24-2	0.0055	1.8
Benzo(a)pyrene	50-32-8	0.061	3.4
Bromodichloromethane	75-27-4	0.35	15
Bromomethane/Methyl bromide	74-83-9	0.11	15
4-Bromophenyl phenyl ether	101-55-3	0.055	15
n-Butyl alcohol	71-36-3	5.6	2.6
Butylate [6]	2008-41-5	0.042	1.4
Butyl benzyl phthalate	85-68-7	0.017	28
2-sec-Butyl-4,6-dinitrophenol/Dinoseb..	88-85-7	0.066	2.5
Carbaryl [6]	63-25-2	0.006	0.14
Carbenzadim [6]	10605-21-7	0.056	1.4
Carbofuran [6]	1563-66-2	0.006	0.14
Carbofuran phenol [6]	1563-38-8	0.056	1.4
Carbon disulfide	75-15-0	3.8	4.8 mg/l TCLP

Carbon tetrachloride	56-23-5	0.057	6.0
Carbosulfan [6]	55285-14-8	0.028	1.4
Chlordane (alpha and gamma isomers)	57-74-9	0.0033	0.26
p-Chloroaniline	106-47-8	0.46	16
Chlorobenzene	108-90-7	0.057	6.0
Chlorobenzilate	510-15-6	0.10	NA
2-Chloro-1,3-butadiene	126-99-8	0.057	0.28
Chlorodibromomethane	124-48-1	0.057	15
Chloroethane	75-00-3	0.27	6.0
bis(2-Chloroethoxy)methane	111-91-1	0.036	7.2
bis(2-Chloroethyl)ether	111-44-4	0.033	6.0
Chloroform	67-66-3	0.046	6.0
bis(2-Chloroisopropyl)ether	39638-32-9	0.055	7.2
p-Chloro-m-cresol	59-50-7	0.018	14
2-Chloroethyl vinyl ether	110-75-8	0.062	NA
Chloromethane/Methyl chloride	74-87-3	0.19	30
2-Chloronaphthalene	91-58-7	0.055	5.6
2-Chlorophenol	95-57-8	0.044	5.7
3-Chloropropylene	107-05-1	0.036	30
Chrysene	218-01-9	0.059	3.4
o-Cresol	95-48-7	0.11	5.6
m-Cresol (difficult to distinguish from p-cresol).	108-39-4	0.77	5.6
p-Cresol (difficult to distinguish from m-cresol).	106-44-5	0.77	5.6
m-Cumenyl methylcarbamate [6]	64-00-6	0.056	1.4
Cyclohexanone	108-94-1	0.36	0.75 mg/l TCLP
o,p'-DDD	53-19-0	0.023	0.087
p,p'-DDD	72-54-8	0.023	0.087
o,p'-DDE	3424-82-6	0.031	0.087
p,p'-DDE	72-55-9	0.031	0.087
o,p'-DDT	789-02-6	0.0039	0.087
p,p'-DDT	50-29-3	0.0039	0.087
Dibenz(a,h)anthracene	53-70-3	0.055	8.2
Dibenz(a,e)pyrene	192-65-4	0.061	NA
1,2-Dibromo-3-chloropropane	96-12-8	0.11	15
1,2-Dibromoethane/ Ethylene dibromide	106-93-4	0.028	15
Dibromomethane	74-95-3	0.11	15
m-Dichlorobenzene	541-73-1	0.036	6.0
o-Dichlorobenzene	95-50-1	0.088	6.0
p-Dichlorobenzene	106-46-7	0.090	6.0
Dichlorodifluoromethane	75-71-8	0.23	7.2
1,1-Dichloroethane	75-34-3	0.059	6.0
1,2-Dichloroethane	107-06-2	0.21	6.0
1,1-Dichloroethylene	75-35-4	0.025	6.0
trans-1,2-Dichloroethylene	156-60-5	0.054	30
2,4-Dichlorophenol	120-83-2	0.044	14
2,6-Dichlorophenol	87-65-0	0.044	14
2,4-Dichlorophenoxyacetic acid/2,4-D...	94-75-7	0.72	10
1,2-Dichloropropane	78-87-5	0.85	18
cis-1,3-Dichloropropylene	10061-01-5	0.036	18
trans-1,3-Dichloropropylene	10061-02-6	0.036	18
Dieldrin	60-57-1	0.017	0.13

Diethylene glycol, dicarbamate[6]	5952-26-1	0.056	1.4
Diethyl phthalate	84-66-2	0.20	28
p-Dimethylaminoazobenzene	60-11-7	0.13	NA
2-4-Dimethyl phenol	105-67-9	0.036	14
Dimethyl phthalate	131-11-3	0.047	28
Dimetilan [6]	644-64-4	0.056	1.4
Di-n-butyl phthalate	84-74-2	0.057	28
1,4-Dinitrobenzene	100-25-4	0.32	2.3
4,6-Dinitro-o-cresol	534-52-1	0.28	160
2,4-Dinitrophenol	51-28-5	0.12	160
2,4-Dinitrotoluene	121-14-2	0.32	140
2,6-Dinitrotoluene	606-20-2	0.55	28
Di-n-octyl phthalate	117-84-0	0.017	28
Di-n-propylnitrosamine	621-64-7	0.40	14
1,4-Dioxane	123-91-1	12.0	170
Diphenylamine (difficult to distinguish from diphenylnitrosamine).	122-39-4	0.92	13
Diphenylnitrosamine (difficult to distinguish from diphenylamine).	86-30-6	0.92	13
1,2-Diphenylhydrazine	122-66-7	0.087	NA
Disulfoton	298-04-4	0.017	6.2
Dithiocarbamates (total) [6]	137-30-4	0.028	28
Endosulfan I	959-98-8	0.023	0.066
Endosulfan II	33213-65-9	0.029	0.13
Endosulfan sulfate	1031-07-8	0.029	0.13
Endrin	72-20-8	0.0028	0.13
Endrin aldehyde	7421-93-4	0.025	0.13
EPTC [6]	759-94-4	0.042	1.4
Ethyl acetate	141-78-6	0.34	33
Ethyl benzene	100-41-4	0.057	10
Ethyl cyanide/Propanenitrile	107-12-0	0.24	360
Ethyl ether	60-29-7	0.12	160
bis(2-Ethylhexyl) phthalate	117-81-7	0.28	28
Ethyl methacrylate	97-63-2	0.14	160
Ethylene oxide	75-21-8	0.12	NA
Famphur	52-85-7	0.017	15
Fluoranthene	206-44-0	0.068	3.4
Fluorene	86-73-7	0.059	3.4
Formetanate hydrochloride [6]	23422-53-9	0.056	1.4
Formparanate [6]	17702-57-7	0.056	1.4
Heptachlor	76-44-8	0.0012	0.066
Heptachlor epoxide	1024-57-3	0.016	0.066
Hexachlorobenzene	118-74-1	0.055	10
Hexachlorobutadiene	87-68-3	0.055	5.6
Hexachlorocyclopentadiene	77-47-4	0.057	2.4
HxCDDs (All Hexachlorodibenzo-p- dioxins).	NA	0.000063	0.001
HxCDFs (All Hexachlorodibenzo-furans)	NA	0.000063	0.001
Hexachloroethane	67-72-1	0.055	30
Hexachloropropylene	1888-71-7	0.035	30
Indeno (1,2,3-c,d) pyrene	193-39-5	0.0055	3.4
Iodomethane	74-88-4	0.19	65
Isobutyl alcohol	78-83-1	5.6	170
Isodrin	465-73-6	0.021	0.066
Isolan [6]	119-38-0	0.056	1.4

Isosafrole	120-58-1	0.081	2.6
Kepone	143-50-0	0.0011	0.13
Methacrylonitrile	126-98-7	0.24	84
Methanol	67-56-1	5.6	0.75 mg/l TCLP
Methapyrilene	91-80-5	0.081	1.5
Methiocarb [6]	2032-65-7	0.056	1.4
Methomyl [6]	16752-77-5	0.028	0.14
Methoxychlor	72-43-5	0.25	0.18
3-Methylcholanthrene	56-49-5	0.0055	15
4,4-Methylene bis(2-chloroaniline)	101-14-4	0.50	30
Methylene chloride	75-09-2	0.089	30
Methyl ethyl ketone	78-93-3	0.28	36
Methyl isobutyl ketone	108-10-1	0.14	33
Methyl methacrylate	80-62-6	0.14	160
Methyl methansulfonate	66-27-3	0.018	NA
Methyl parathion	298-00-0	0.014	4.6
Metolcarb [6]	1129-41-5	0.056	1.4
Mexacarbate [6]	315-18-4	0.056	1.4
Molinate [6]	2212-67-1	0.042	1.4
Naphthalene	91-20-3	0.059	5.6
2-Naphthylamine	91-59-8	0.52	NA
o-Nitroaniline	88-74-4	0.27	14
p-Nitroaniline	100-01-6	0.028	28
Nitrobenzene	98-95-3	0.068	14
5-Nitro-o-toluidine	99-55-8	0.32	28
o-Nitrophenol	88-75-5	0.028	13
p-Nitrophenol	100-02-7	0.12	29
-Nitrosodiethylamine	55-18-5	0.40	28
N-Nitrosodimethylamine	62-75-9	0.40	2.3
N-Nitroso-di-n-butylamine	924-16-3	0.40	17
N-Nitrosomethylethylamine	10595-95-6	0.40	2.3
N-Nitrosomorpholine	59-89-2	0.40	2.3
N-Nitrosopiperidine	100-75-4	0.013	35
N-Nitrosopyrrolidine	930-55-2	0.013	35
Oxamyl [6]	23135-22-0	0.056	0.28
Parathion	56-38-2	0.014	4.6
Total PCBs (sum of all PCB isomers, or all Aroclors).	1336-36-3	0.10	10
Pebulate [6]	1114-71-2	0.042	1.4
Pentachlorobenzene	608-93-5	0.055	10
PeCDDs (All Pentachlorodibenzo-p-dioxins).	NA	0.000063	0.001
PeCDFs (All Pentachlorodibenzo-furans).	NA	0.000035	0.001
Pentachloroethane	76-01-7	0.055	6.0
Pentachloronitrobenzene	82-68-8	0.055	4.8
Pentachlorophenol	87-86-5	0.089	7.4
Phenacetin	62-44-2	0.081	16
Phenanthrene	85-01-8	0.059	5.6
Phenol	108-95-2	0.039	6.2
o-Phenylenediamine [6]	95-54-5	0.056	5.6
Phorate	298-02-2	0.021	4.6
Phthalic acid	100-21-0	0.055	28
Phthalic anhydride	85-44-9	0.055	28
Physostigmine [6]	57-47-6	0.056	1.4
Physostigmine salicylate [6]	57-64-7	0.056	1.4
Promecarb [6]	2631-37-0	0.056	1.4

Pronamide	23950-58-5	0.093	1.5
Propham [6]	122-42-9	0.056	1.4
Propoxur [6]	114-26-1	0.056	1.4
Prosulfocarb [6]	52888-80-9	0.042	1.4
Pyrene	129-00-0	0.067	8.2
Pyridine	110-86-1	0.014	16
Safrole	94-59-7	0.081	22
Silvex/2,4,5-TP	93-72-1	0.72	7.9
1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14
TCDDs (All Tetrachlorodi-benzo-p-dioxins).	NA	0.000063	0.001
TCDFs (All Tetrachlorodibenzofurans)	NA	0.000063	0.001
1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0
1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0
Tetrachloroethylene	127-18-4	0.056	6.0
2,3,4,6-Tetrachlorophenol	58-90-2	0.030	7.4
Thiodicarb [6]	59669-26-0	0.019	1.4
Thiophanate-methyl \6\	23564-05-8	0.056	1.4
Tirpate [6]	26419-73-8	0.056	0.28
Toluene	108-88-3	0.080	10
Toxaphene	8001-35-2	0.0095	2.6
Triallate [6]	2303-17-5	0.042	1.4
Tribromomethane/Bromoform	75-25-2	0.63	15
1,2,4-Trichlorobenzene	120-82-1	0.055	19
1,1,1-Trichloroethane	71-55-6	0.054	6.0
1,1,2-Trichloroethane	79-00-5	054	6.0
Trichloroethylene	79-01-6	054	6.0
Trichloromonofluoromethane	75-69-4	0.020	30
2,4,5-Trichlorophenol	95-95-4	0.18	7.4
2,4,6-Trichlorophenol	88-06-2	0.035	7.4
2,4,5-Trichlorophenoxyacetic acid/2,4,5- T.	93-76-5	0.72	7.9
1,2,3-Trichloropropane	96-18-4	0.85	30
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.057	30
Triethylamine [6]	101-44-8	0.081	1.5
tris-(2,3-Dibromopropyl) phosphate	126-72-7	0.11	0.10
Vernolate [6]	1929-77-7	0.042	1.4
Vinyl chloride	75-01-4	0.27	6.0
Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations).	1330-20-7	0.32	30
II. Inorganic Constituents:			
Antimony	7440-36-0	1.9	2.1 mg/l TCLP
Arsenic	7440-38-2	1.4	5.0 mg/l TCLP
Barium	7440-39-3	1.2	7.6 mg/l TCLP
Beryllium	7440-41-7	0.82	0.014 mg/l TCLP
Cadmium	7440-43-9	0.69	0.19 mg/l TCLP
Chromium (Total)	7440-47-3	2.77	0.86 mg/l TCLP
Cyanides (Total) [4]	57-12-5	1.2	590
Cyanides (Amenable) [4]	57-12-5	0.86	30
Fluoride [5]	16984-48-8	35	NA
Lead	7439-92-1	0.69	0.37 mg/l TCLP
Mercury--Nonwastewater from Retort	7439-97-6	NA	0.20 mg/l TCLP
Mercury--All Others	7439-97-6	0.15	0.025 mg/l TCLP
Nickel	7440-02-0	3.98	5.0 mg/l TCLP
Selenium	7782-49-2	0.82	0.16 mg/l TCLP
Silver	7440-22-4	0.43	0.30 mg/l TCLP

Sulfide.....	18496-25-8	14	NA
Thallium.....	7440-28-0	1.4	0.078 mg/l TCLP
Vanadium [5]….....	7440-62-2	4.3	0.23 mg/l TCLP
Zinc [5].....	7440-66-6	2.61	5.3 mg/l TCLP

Footnotes to Universal Treatment Standards Table:

[1] CAS means Chemical Abstract Services. When the waste code and/or regulated constituents are described as a combination of a chemical with it's salts and/or esters, the CAS number is given for the parent compound only.44.

[2] Concentration standards for wastewaters are expressed in mg/l and are based on analysis of composite samples.

[3] Except for Metals (EP or TCLP) and Cyanides (Total and Amenable) the nonwastewater treatment standards expressed as a concentration were established, in part, based upon incineration in units operated in accordance with the technical requirements of 40 CFR part 264, subpart O, or 40 CFR part 265, subpart O, or based upon combustion in fuel substitution units operating in accordance with applicable technical requirements. A facility may comply with these treatment standards according to provisions in Sec. 268.40(d). All concentration standards for nonwastewaters are based on analysis of grab samples.

[4] Both Cyanides (Total) and Cyanides (Amenable) for nonwastewaters are to be analyzed using Method 9010 or 9012, found in ``Test Methods for Evaluating Solid Waste, Physical/Chemical Methods'', EPA Publication SW-846, as incorporated by reference in 40 CFR 260.11, with a sample size of 10 grams and a distillation time of one hour and 15 minutes.

[5] These constituents are not ``underlying hazardous constituents'' in characteristic wastes, according to the definition at Sec. 268.2(i).

[6] Between August 26, 1996, and August 26, 1997, these constituents are not ``underlying hazardous constituents'' as defined at Sec. 268.2(i).

(b) [Reserved]

[59 FR 48103, Sept. 19, 1994, as amended by 60 FR 302, Jan. 3, 1995; 61 FR 15654, Apr. 8, 1996; 61 FR 33690, June 28, 1996; 62 FR 7596, Feb. 19,1997]

Subpart E--Prohibitions on Storage

Sec. 268.50 Prohibitions on storage of restricted wastes.

(a) Except as provided in this section, the storage of hazardous wastes restricted from land disposal under subpart C of this part of RCRA section 3004 is prohibited, unless the following conditions are met:

(1) A generator stores such wastes in tanks, containers, or containment buildings on-site solely for the purpose of the accumulation of such quantities of hazardous waste as necessary to facilitate proper recovery, treatment, or disposal and the generator complies with the requirements in Sec. 262.34 and parts 264 and 265 of this chapter.

(2) An owner/operator of a hazardous waste treatment, storage, or disposal facility stores such wastes in tanks, containers, or containment buildings solely for the purpose of the accumulation of such quantities of hazardous waste as necessary to facilitate proper recovery, treatment, or disposal and:

(i) Each container is clearly marked to identify its contents and the date each period of accumulation begins;
(ii) Each tank is clearly marked with a description of its contents, the quantity of each hazardous waste received, and the date each period of accumulation begins, or such information for each tank is recorded and maintained in the operating record at that facility. Regardless of whether the tank itself is marked, an owner/operator must comply with the operating record requirements specified in Sec. 264.73 or Sec. 265.73.

(3) A transporter stores manifested shipments of such wastes at a transfer facility for 10 days or less.

(b) An owner/operator of a treatment, storage or disposal facility may store such wastes for up to one year unless the Agency can demonstrate that such storage was not solely for the purpose of accumulation of such quantities of hazardous waste as are necessary to facilitate proper recovery, treatment, or disposal.

(c) A owner/operator of a treatment, storage or disposal facility may store such wastes beyond one year; however, the owner/operator bears the burden of proving that such storage was solely for the purpose of accumulation of such quantities of hazardous waste as are necessary to facilitate proper recovery, treatment, or disposal.

(d) If a generator's waste is exempt from a prohibition on the type of land disposal utilized for the waste (for example, because of an approved case-by-case extension under Sec. 268.5, an approved Sec. 268.6 petition, or a national capacity variance under subpart C), the prohibition in paragraph (a) of this section does not apply during the period of such exemption.

(e) The prohibition in paragraph (a) of this section does not apply to hazardous wastes that meet the treatment standards specified under Secs. 268.41, 268.42, and 268.43 or the treatment standards specified under the variance in Sec. 268.44, or, where treatment standards have not been specified, is in compliance with the applicable prohibitions specified in Sec. 268.32 or RCRA section 3004.

(f) Liquid hazardous wastes containing polychlorinated biphenyls (PCBs) at concentrations greater than or equal to 50 ppm must be stored at a facility that meets the requirements of 40 CFR 761.65(b) and must be removed from storage and treated or disposed as required by this part within one year of the date when such wastes are first placed into storage. The provisions of paragraph (c) of this section do not apply to such PCB wastes prohibited under Sec. 268.32 of this part.

[51 FR 40642, Nov. 7, 1986; 52 FR 21017, June 4, 1987, as amended at 52 FR 25791, July 8, 1987; 54 FR 36972, Sept. 6, 1989; 57 FR 37281, Aug. 18, 1992]

Appendix I to Part 268--Toxicity Characteristic Leaching Procedure (TCLP)

Note: The TCLP (Method 1311) is published in ``Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,'' EPA Publication SW- 846, as incorporated by reference in Sec. 260.11 of this chapter.

[58 FR 46051, Aug. 31, 1993]

Effective Date Note: At 62 FR 26025, May 12, 1997, appendix I to part 268 was removed and reserved, effective Aug. 11, 1997.

Appendix II--Treatment Standards (As Concentrations in the Treatment Residual Extract)

Note: The treatment standards for F001-F005 Spent Solvent Wastes appear in Secs. 268.41, 268.42, 268.43.

[57 FR 37281, Aug. 18, 1992]

Effective Date Note: At 62 FR 26025, May 12, 1997, appendix II to part 268 was removed and reserved, effective Aug. 11, 1997.

Appendix III to Part 268--List of Halogenated Organic Compounds Regulated Under Sec. 268.32

In determining the concentration of HOCs in a hazardous waste for purposes of the Sec. 268.32 land disposal prohibition, EPA has defined the HOCs that must be included in the calculation as any compounds having a carbon-halogen bond which are listed in this appendix (see Sec. 268.2). Appendix III to part 268 consists of the following compounds:

Volatiles

Bromodichloromethane
Bromomethane
Carbon Tetrachloride
Chlorobenzene
2-Chloro-1,3-butadiene
Chlorodibromomethane
Chloroethane
2-Chloroethyl vinyl ether
Chloroform
Chloromethane
3-Chloropropene
1,2-Dibromo-3-chloropropane
1,2-Dibromomethane
Dibromomethane
Trans-1,4-Dichloro-2-butene
Dichlorodifluoromethane
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethylene
Trans-1,2-Dichloroethene
1,2-Dichloropropane
Trans-1,3-Dichloropropene
cis-1,3-Dichloropropene
Iodomethane
Methylene chloride
1,1,1,2-Tetrachloroethane
1,1,2,2-Tetrachloroethane
Tetrachloroethene
Tribromomethane
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethene
Trichloromonofluoromethane
1,2,3-Trichloropropane
Vinyl chloride

Semivolatiles

Bis(2-chloroethoxy)ethane
Bis(2-chloroethyl)ether
Bis(2-chloroisopropyl) ether
p-Chloroaniline
Chlorobenzilate
p-Chloro-m-cresol
2-Chloronaphthalene
2-Chlorophenol
3-Chloropropionitrile
m-Dichlorobenzene
o-Dichlorobenzene
p-Dichlorobenzene
3,3'-Dichlorobenzidine
2,4-Dichlorophenol
2,6-Dichlorophenol
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachloroethane
Hexachloroprophene
Hexachloropropene
4,4'-Methylenebis(2-chloroaniline)
Pentachlorobenzene
Pentachloroethane
Pentachloronitrobenzene
Pentachlorophenol
Pronamide
1,2,4,5-Tetrachlorobenzene
2,3,4,6-Tetrachlorophenol
1,2,4-Trichlorobenzene
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol
Tris(2,3-dibromopropyl)phosphate

Organochlorine Pesticides

Aldrin
alpha-BHC
beta-BHC
delta-BHC
gamma-BHC
Chlordane
DDD
DDE
DDT
Dieldrin
Endosulfan I
Endosulfan II
Endrin
Endrin aldehyde
Heptachlor

Heptachlor epoxide
Isodrin
Kepone
Methoxyclor
Toxaphene

Phenoxyacetic Acid Herbicides

2,4-Dichlorophenoxyacetic acid
Silvex
2,4,5-T

PCBs

Aroclor 1016
Aroclor 1221
Aroclor 1232
Aroclor 1242
Aroclor 1248
Aroclor 1254
Aroclor 1260
PCBs not otherwise specified

Dioxins and Furans

Hexachlorodibenzo-p-dioxins
Hexachlorodibenzofuran
Pentachlorodibenzo-p-dioxins
Pentachlorodibenzofuran
Tetrachlorodibenzo-p-dioxins
Tetrachlorodibenzofuran
2,3,7,8-Tetrachlorodibenzo-p-dioxin

[52 FR 25791, July 8, 1987]

Effective Date Note: At 62 FR 26025, May 12, 1997, appendix III to part 268 was removed and reserved, effective Aug. 11, 1997.

Appendix IV to Part 268--Wastes Excluded From Lab Packs Under the Alternative Treatment Standards of Sec. 268.42(c)

Hazardous waste with the following EPA Hazardous Waste Codes may not be placed in lab packs under the alternative lab pack treatment standards of Sec. 268.42(c): D009, F019, K003, K004, K005, K006, K062, K071, K100, K106, P010, P011, P012, P076, P078, U134, U151.

[59 FR 48107 Sept. 19, 1994]

Appendix V to Part 268 [Reserved]

Appendix VI to Part 268--Recommended Technologies to Achieve Deactivation of Characteristics in Section 268.42

The treatment standard for many characteristic wastes is stated in the Sec. 268.40 Table of Treatment Standards as ``Deactivation and meet UTS.'' EPA has determined that many technologies, when used alone or in combination, can achieve the deactivation portion of the treatment standard. Characteristic wastes that are not managed in a facility regulated by the Clean Water Act (CWA) or in a CWA-equivalent facility, and that also contain underlying hazardous constituents (see Sec. 268.2(i)) must be treated not only by a ``deactivating'' technology to remove the characteristic, but also to achieve the universal treatment standards (UTS) for underlying hazardous constituents. The following appendix presents a partial list of technologies, utilizing the five letter technology codes established in 40 CFR 268.42 Table 1, that may be useful in meeting the treatment standard. Use of these specific technologies is not mandatory and does not preclude direct reuse, recovery, and/or the use of other pretreatment technologies, provided deactivation is achieved and underlying hazardous constituents are treated to achieve the UTS.

Waste code/subcategory	Nonwastewaters	Wastewaters
D001 Ignitable Liquids based on 261.21(a)(1)--Low TOC Nonwastewater Subcategory (containing 1% to <10% TOC).	RORGS	n.a.
	INCIN	
	WETOX	
	CHOXD	
	BIODG	
D001 Ignitable Liquids based on 261.21(a)(1)--Ignitable Wastewater Subcategory (containing <1% TOC).	n.a.	RORGS
		INCIN
		WETOX
		CHOXD
		BIODG
D001 Compressed Gases based on 261.21(A)(3)...	RCGAS	n.a.
	INCIN	
	FSUBS	
	ADGAS fb. INCIN	
	ADGAS fb. (CHOXD; or CHRED)	
D001 Ignitable Reactives based on 261.21(a)(2)	WTRRX	n.a.
	CHOXD	
	CHRED	
	STABL	
	INCIN	
D001 Ignitable Oxidizers based on 261.21(a)(4)	CHRED	CHRED
	INCIN	INCIN
D002 Acid Subcategory based on 261.22(a)(1) with pH less than or equal to 2.	RCORR	NEUTR
	NEUTR	INCIN
	INCIN	
D002 Alkaline Subcategory based on 261.22(a)(1) with pH greater than or equal to 12.5.	NEUTR	NEUTR
	INCIN	INCIN
D002 Other Corrosives based on 261.22(a)(2)...	CHOXD	CHOXD
	CHRED	CHRED
	INCIN	INCIN
	STABL	
D003 Water Reactives based on 261.23(a) (2), (3), and (4).	INCIN	n.a.
	WTRRX	
	CHOXD	
	CHRED	

D003 Reactive Sulfides based on 261.23(a)(5)..	CHOXD.....CHOXD
	CHRED.....CHRED
	INCIN.....BIODG
	STABL.....INCIN
D003 Explosives based on 261.23(a) (6), (7), and (8).	INCIN.....INCIN
	CHOXD.....CHOXD
	CHRED.....CHRED
	BIODG
	CARBN
D003 Other Reactives based on 261.23(a)(1)....	INCIN..... INCIN
	CHOXD..... CHOXD
	CHRED.....CHRED
	BIODG
	CARBN
K044 Wastewater treatment sludges from the manufacturing and processing of explosives.	CHOXD..... CHOXD
	CHRED..... CHRED
	INCIN..... BIODG
	CARBN
	INCIN
K045 Spent carbon from the treatment of wastewaters containing explosives.	CHOXD..... CHOXD
	CHRED..... CHRED
	INCIN..... BIODG
	CARBN
	INCIN
K047 Pink/red water from TNT operations.....…….....CHOXD..... CHOXD	
	CHRED..... CHRED
	INCIN..... BIODG
	CARBN
	INCIN

Note: ``n.a.'' stands for ``not applicable''; ``fb.'' stands for ``followed by''.

[55 FR 22714, June 1, 1990, as amended at 62 FR 26025, May 12, 1997]

Effective Date Note: At 62 FR 26025, May 12, 1997, the introductory text of appendix VI to part 268 was revised, effective Aug. 11, 1997. For the convenience of the user, the superseded text is set forth as follows:

Appendix VI to Part 268--Recommended Technologies to Achieve Deactivation of Characteristics in Section 268.42

The treatment standard for many subcategories of D001, D002, and D003 wastes as well as for K044, K045, and K047 wastes is listed in 268.42 simply as ``Deactivation to remove the characteristics of ignitability, corrosivity, and reactivity''. EPA has determined that many technologies, when used alone or in combination, can achieve this standard. The following appendix presents a partial list of these technologies, utilizing the five letter technology codes established in 40 CFR 268.42 Table 1. Use of these specific technologies is not mandatory and does not preclude direct reuse, recovery, and/or the use of other pretreatment technologies provided deactivation is achieved and these alternative methods are not performed in units designated as land disposal.

Appendix VII to Part 268--LDR Effective Dates of Surface Disposed Prohibited Hazardous Wastes

Table 1.--Effective Dates of Surface Disposed Wastes (Non-Soil and Debris) Regulated in the LDRS [a]--

Comprehensive List

Waste code	Waste category	Effective date
D001 [c]	All (except High TOC Ignitable Liquids).	Aug. 9, 1993.
D001	High TOC Ignitable Liquids	Aug. 8, 1990.
D002 [c]	All	Aug. 9, 1993.
D003 [e]	All	July 8, 1996.
D004	Nonwastewater	May 8, 1992.
D004	Wastewater	Aug. 8, 1992.
D005	All	Aug. 8, 1990.
D006	All	Aug. 8, 1990.
D007	All	Aug. 8, 1990.
D008	Lead materials before secondary smelting	May 8, 1992.
D008	All others	Aug. 8, 1990.
D009	Nonwastewater	May 8, 1992.
D009	All others	Aug. 8, 1990.
D010	All	Aug. 8, 1990.
D011	All	Aug. 8, 1990.
D012 (that exhibit the toxicity characteristic based on the TCLP) [d].	All	Dec. 14, 1994.
D013 (that exhibit the toxicity characteristic based on the TCLP) [d].	All	Dec. 14, 1994.
D014 (that exhibit the toxicity characteristic based on the TCLP) [d]..	All	Dec. 14, 1994.
D015 (that exhibit the toxicity characteristic based on the TCLP) [d].	All	Dec. 14, 1994.
D016 (that exhibit the toxicity characteristic based on the TCLP) [d].	All	Dec. 14, 1994.
D017 (that exhibit the toxicity characteristic based on the TCLP) [d].	All	Dec. 14, 1994.
D018	Mixed with radioactive wastes	Sept. 19, 1996.
D018	All others	Dec. 19, 1994.
D019	Mixed with radioactive wastes	Sept. 19, 1996.
D019	All others	Dec. 19, 1994.
D020	Mixed with radioactive wastes	Sept. 19, 1996.
D020	All others	Dec. 19, 1994.
D021	Mixed with radioactive wastes	Sept. 19, 1996.
D021	All others	Dec. 19, 1994.
D022	Mixed with radioactive wastes	Sept. 19, 1996.
D022	All others	Dec. 19, 1994.
D023	Mixed with radioactive wastes	Sept. 19, 1996.
D023	All others	Dec. 19, 1994.
D024	Mixed with radioactive wastes	Sept. 19, 1996.
D024	All others	Dec. 19, 1994.
D025	Mixed with radioactive wastes	Sept. 19, 1996.
D025	All others	Dec. 19, 1994.
D026	Mixed with radioactive wastes	Sept. 19, 1996.
D026	All others	Dec. 19, 1994.
D027	Mixed with radioactive wastes	Sept. 19, 1996.
D027	All others	Dec. 19, 1994.

D028	Mixed with radioactive wastes	Sept. 19, 1996.
D028	All others	Dec. 19, 1994.
D029	Mixed with radioactive wastes	Sept. 19, 1996.
D029	All others	Dec. 19, 1994.
D030	Mixed with radioactive wastes	Sept. 19. 1996.
D030	All others	Dec. 19, 1994.
D031	Mixed with radioactive wastes	Sept. 19, 1996.
D031	All others	Dec. 19, 1994.
D032	Mixed with radioactive wastes	Sept. 19, 1996.
D032	All others	Dec. 19, 1994.
D033	Mixed with radioactive wastes	Sept. 19, 1996.
D033	All others	Dec. 19, 1994.
D034	Mixed with radioactive wastes	Sept. 19, 1996.
D034	All others	Dec. 19, 1994.
D035	Mixed with radioactive wastes	Sept. 19, 1996.
D035	All others	Dec. 19, 1994.
D036	Mixed with radioactive wastes	Sept. 19, 1996.
D036	All others	Dec. 19, 1994.
D037	Mixed with radioactive wastes	Sept. 19, 1996.
D037	All others	Dec. 19, 1994.
D038	Mixed with radioactive wastes	Sept. 19, 1996.
D038	All others	Dec. 19, 1994.
D039	Mixed with radioactive wastes	Sept. 19, 1996.
D039	All others	Dec. 19, 1994.
D040	Mixed with radioactive wastes	Sept. 19, 1996.
D040	All others	Dec. 19, 1994.
D041	Mixed with radioactive wastes	Sept. 19, 1996.
D041	All others	Dec. 19, 1994.
D042	Mixed with radioactive wastes	Sept. 19, 1996.
D042	All others	Dec. 19, 1994.
D043	Mixed with radioactive wastes	Sept. 19, 1996.
D043	All others	Dec. 19, 1994.
F001	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids.	Nov. 8, 1988.
F001	All others	Nov. 8, 1986.
F002 (1,1,2-trichloroethane)	Wastewater and Nonwastewater	Aug. 8, 1990.
F002	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids.	Nov. 8, 1988.
F002	All others	Nov. 8, 1986.
F003	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids.	. Nov. 8, 1988.
F003	All others	Nov. 8, 1986.
F004	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids.	Nov. 8, 1988.

F004	All others	Nov. 8, 1986.
F005 (benzene, 2-ethoxy ethanol, 2- nitropropane).	Wastewater and Nonwastewater	Aug. 8, 1990.
F005	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids.	Nov. 8, 1988.
F005	All others	Nov. 8, 1986.
F006	Wastewater	Aug. 8, 1990.
F006	Nonwastewater	Aug. 8, 1988.
F006 (cyanides)	Nonwastewater	July 8, 1989.
F007	All	July 8, 1989.
F008	All	July 8, 1989.
F009	All	July 8, 1989.
F010	All	June 8, 1989.
F011 (cyanides)	Nonwastewater	Dec. 8, 1989.
F011	All others	July 8, 1989.
F012 (cyanides)	Nonwastewater	Dec. 8, 1989.
F012	All others	July 8, 1989.
F019	All	Aug. 8, 1990.
F020	All	Nov. 8, 1988.
F021	All	Nov. 8, 1988.
F025	All	Aug. 8, 1990.
F026	All	Nov. 8, 1988.
F027	All	Nov. 8, 1988.
F028	All	Nov. 8, 1988.
F032	Mixed with radioactive wastes	May 12, 1999
F032	All others	May 12, 1997
F033	Mixed with radioactive wastes	May 12, 1999
F033	All others	May 12, 1997
F034	Mixed with radioactive wastes	May 12, 1999
F034	All others	May 12, 1997
F037	Not generated from surface impoundment cleanouts or closures.	June 30, 1993.
F037	Generated from surface impoundment cleanouts or closures.	June 30, 1994.
F037	Mixed with radioactive wastes	June 30, 1994.
F038	Not generated from surface impoundment cleanouts or closures.	June 30, 1993.
F038	Generated from surface impoundment cleanouts or closures.	June 30, 1994.
F038	Mixed with radioactive wastes	June 30, 1994.
F039	Wastewater	Aug. 8, 1990.
F039	Nonwastewater	May 8, 1992.
K001 (organics) [b]	All	Aug. 8, 1988.
K001	All others	Aug. 8, 1988.
K002	All	Aug. 8, 1990.
K003	All	Aug. 8, 1990.
K004	Wastewater	Aug. 8, 1990.
K004	Nonwastewater	Aug. 8, 1988.
K005	Wastewater	Aug. 8, 1990.
K005	Nonwastewater	June 8, 1989.
K006	All	Aug. 8, 1990.
K007	Wastewater	Aug. 8, 1990.
K007	Nonwastewater	June 8, 1989.

K008	Wastewater	Aug. 8, 1990.
K008	Nonwastewater	Aug. 8, 1988.
K009	All	June 8, 1989.
K010	All	June 8, 1989.
K011	Wastewater	Aug. 8, 1990.
K011	Nonwastewater	June 8, 1989.
K013	Wastewater	Aug. 8, 1990.
K013	Nonwastewater	June 8, 1989.
K014	Wastewater	Aug. 8, 1990.
K014	Nonwastewater	June 8, 1989.
K015	Wastewater	Aug. 8, 1988.
K015	Nonwastewater	Aug. 8, 1990.
K016	All	Aug. 8, 1988.
K017	All	Aug. 8, 1990.
K018	All	Aug. 8, 1988.
K019	All	Aug. 8, 1988.
K020	All	Aug. 8, 1988.
K021	Wastewater	Aug. 8, 1990.
K021	Nonwastewater	Aug. 8, 1988.
K022	Wastewater	Aug. 8, 1990.
K022	Nonwastewater	Aug. 8, 1988.
K023	All	June 8, 1989.
K024	All	Aug. 8, 1988.
K025	Wastewater	Aug. 8, 1990.
K025	Nonwastewater	Aug. 8, 1988.
K026	All	Aug. 8, 1990.
K027	All	June 8, 1989.
K028 (metals)	Nonwastewater	Aug. 8, 1990.
K028	All others	June 8, 1989.
K029	Wastewater	Aug. 8, 1990.
K029	Nonwastewater	June 8, 1989.
K030	All	Aug. 8, 1988.
K031	Wastewater	Aug. 8, 1990.
K031	Nonwastewater	May 8, 1992.
K032	All	Aug. 8, 1990.
K033	All	Aug. 8, 1990.
K034	All	Aug. 8, 1990.
K035	All	Aug. 8, 1990.
K036	Wastewater	June 8, 1989.
K036	Nonwastewater	Aug. 8, 1988.
K037 [b]	Wastewater	Aug. 8, 1988.
K037	Nonwastewater	Aug. 8, 1988.
K038	All	June 8, 1989.
K039	All	June 8, 1989.
K040	All	June 8, 1989.
K041	All	Aug. 8, 1990.
K042	All	Aug. 8, 1990.
K043	All	June 8, 1989.
K044	All	Aug. 8, 1988.
K045	All	Aug. 8, 1988.
K046 (Nonreactive)	Nonwastewater	Aug. 8, 1988.
K046	All others	Aug. 8, 1990.
K047	All	Aug. 8, 1988.
K048	Wastewater	Aug. 8, 1990.
K048	Nonwastewater	Nov. 8, 1990.
K049	Wastewater	Aug. 8, 1990.

K049	Nonwastewater	Nov. 8, 1990.
K050	Wastewater	Aug. 8, 1990.
K050	Nonwastewater	Nov. 8, 1990.
K051	Wastewater	Aug. 8, 1990.
K051	Nonwastewater	Nov. 8, 1990.
K052	Wastewater	Aug. 8, 1990.
K052	Nonwastewater	Nov. 8, 1990.
K060	Wastewater	Aug. 8, 1990.
K060	Nonwastewater	Aug. 8, 1988.
K061	Wastewater	Aug. 8, 1990.
K061	Nonwastewater	June 30, 1992.
K062	All	Aug. 8, 1988.
K069 (Non-Calcium Sulfate)	Nonwastewater	Aug. 8, 1988.
K069	All others	Aug. 8, 1990.
K071	All	Aug. 8, 1990.
K073	All	Aug. 8, 1990.
K083	All	Aug. 8, 1990.
K084	Wastewater	Aug. 8, 1990.
K084	Nonwastewater	May 8, 1992.
K085	All	Aug. 8, 1990.
K086 (organics) [b]	All	Aug. 8, 1988.
K086	All others	Aug. 8, 1988.
K087	All	Aug. 8, 1988.
K088	Mixed with radioactive wastes	Apr. 8, 1998.
K088	All others	Jan. 8, 1997.
K093	All	June 8, 1989.
K094	All	June 8, 1989.
K095	Wastewater	Aug. 8, 1990.
K095	Nonwastewater	June 8, 1989.
K096	Wastewater	Aug. 8, 1990.
K096	Nonwastewater	June 8, 1989.
K097	All	Aug. 8, 1990.
K098	All	Aug. 8, 1990.
K099	All	Aug. 8, 1988.
K100	Wastewater	Aug. 8, 1990.
K100	Nonwastewater	Aug. 8, 1988.
K101 (organics)	Wastewater	Aug. 8, 1988.
K101 (metals)	Wastewater	Aug. 8, 1990.
K101 (organics)	Nonwastewater	Aug. 8, 1988.
K101 (metals)	Nonwastewater	May 8, 1992.
K102 (organics)	Wastewater	Aug. 8, 1988.
K102 (metals)	Wastewater	Aug. 8, 1990.
K102 (organics)	Nonwastewater	Aug. 8, 1988.
K102 (metals)	Nonwastewater	May 8, 1992.
K103	All	Aug. 8, 1988.
K104	All	Aug. 8, 1988.
K105	All	Aug. 8, 1990.
K106	Wastewater	Aug. 8, 1990.
K106	Nonwastewater	May 8, 1992.
K107	Mixed with radioactive wastes	June 30, 1994.
K107	All others	Nov. 9, 1992.
K108	Mixed with radioactive wastes	June 30, 1994.
K108	All others	Nov. 9, 1992.
K109	Mixed with radioactive wastes	June 30, 1994.
K109	All others	Nov. 9, 1992.
K110	Mixed with radioactive wastes	June 30, 1994.

K110	All others	Nov. 9, 1992.
K111	Mixed with radioactive wastes	June 30, 1994.
K111	All others	Nov. 9, 1992.
K112	Mixed with radioactive wastes	June 30, 1994.
K112	All others	Nov. 9, 1992.
K113	All	June 8, 1989.
K114	All	June 8, 1989.
K115	All	June 8, 1989.
K116	All	June 8, 1989.
K117	Mixed with radioactive wastes	June 30, 1994.
K117	All others	Nov. 9, 1992.
K118	Mixed with radioactive wastes	June 30, 1994.
K118	All others	Nov. 9, 1992.
K123	Mixed with radioactive wastes	June 30, 1994.
K123	All others	Nov. 9, 1992.
K124	Mixed with radioactive wastes	June 30, 1994.
K124	All others	Nov. 9, 1992.
K125	Mixed with radioactive wastes	June 30, 1994.
K125	All others	Nov. 9, 1992.
K126	Mixed with radioactive wastes	June 30, 1994.
K126	All others	Nov. 9, 1992.
K131	Mixed with radioactive wastes	June 30, 1994.
K131	All others	Nov. 9, 1992.
K132	Mixed with radioactive wastes	June 30, 1994.
K132	All others	Nov. 9, 1992.
K136	Mixed with radioactive wastes	June 30, 1994.
K136	All others	Nov. 9, 1992.
K141	Mixed with radioactive wastes	Sep. 19, 1996.
K141	All others	Dec. 19, 1994.
K142	Mixed with radioactive wastes	Sep. 19, 1996..
K142	All others	Dec. 19, 1994.
K143	Mixed with radioactive wastes	Sep. 19, 1996.
K143	All others	Dec. 19, 1994.
K144	Mixed with radioactive wastes	Sep. 19, 1996.
K144	All others	Dec. 19, 1994.
K145	Mixed with radioactive wastes	Sep. 19, 1996.
K145	All others	Dec. 19, 1994.
K147	Mixed with radioactive wastes	Sep. 19, 1996.
K147	All others	Dec. 19, 1994.
K148	Mixed with radioactive wastes	Sep. 19, 1996.
K148	All others	Dec. 19, 1994.
K149	Mixed with radioactive wastes	Sep. 19, 1996.
K149	All others	Dec. 19, 1994.
K150	Mixed with radioactive wastes	Sep. 19, 1996.
K150	All others	Dec. 19, 1994.
K151	Mixed with radioactive wastes	Sep. 19, 1996.
K151	All others	Dec. 19, 1994.
K156	Mixed with radioactive wastes	Apr. 8, 1998.
K156	All others	July 8, 1996.
K157	Mixed with radioactive wastes	Apr. 8, 1998.
K157	All others	July 8, 1996.
K158	Mixed with radioactive wastes	Apr. 8, 1998.
K158	All others	July 8, 1996.
K159	Mixed with radioactive wastes	Apr. 8, 1998.
K159	All others	July 8, 1996.
K160	Mixed with radioactive wastes	Apr. 8, 1998.

K160	All others	July 8, 1996.
K161	Mixed with radioactive wastes	Apr. 8, 1998.
K161	All others	July 8, 1996.
P001	All	Aug. 8, 1990.
P002	All	Aug. 8, 1990.
P003	All	Aug. 8, 1990.
P004	All	Aug. 8, 1990.
P005	All	Aug. 8, 1990.
P006	All	Aug. 8, 1990.
P007	All	Aug. 8, 1990.
P008	All	Aug. 8, 1990.
P009	All	Aug. 8, 1990.
P010	Wastewater	Aug. 8, 1990.
P010	Nonwastewater	May 8, 1992.
P011	Wastewater	Aug. 8, 1990.
P011	Nonwastewater	May 8, 1992.
P012	Wastewater	Aug. 8, 1990.
P012	Nonwastewater	May 8, 1992.
P013 (barium)	Nonwastewater	Aug. 8, 1990.
P013	All others	June 8, 1989.
P014	All	Aug. 8, 1990.
P015	All	Aug. 8, 1990.
P016	All	Aug. 8, 1990.
P017	All	Aug. 8, 1990.
P018	All	Aug. 8, 1990.
P020	All	Aug. 8, 1990.
P021	All	June 8, 1989.
P022	All	Aug. 8, 1990.
P023	All	Aug. 8, 1990.
P024	All	Aug. 8, 1990.
P026	All	Aug. 8, 1990.
P027	All	Aug. 8, 1990.
P028	All	Aug. 8, 1990.
P029	All	June 8, 1989.
P030	All	June 8, 1989.
P031	All	Aug. 8, 1990.
P033	All	Aug. 8, 1990.
P034	All	Aug. 8, 1990.
P036	Wastewater	Aug. 8, 1990.
P036	Nonwastewater	May 8, 1992.
P037	All	Aug. 8, 1990.
P038	Wastewater	Aug. 8, 1990.
P038	Nonwastewater	May 8, 1992.
P039	All	June 8, 1989.
P040	All	June 8, 1989.
P041	All	June 8, 1989.
P042	All	Aug. 8, 1990.
P043	All	June 8, 1989.
P044	All	June 8, 1989.
P045	All	Aug. 8, 1990.
P046	All	Aug. 8, 1990.
P047	All	Aug. 8, 1990.
P048	All	Aug. 8, 1990.
P049	All	Aug. 8, 1990.
P050	All	Aug. 8, 1990.
P051	All	Aug. 8, 1990.

P054	All	Aug. 8, 1990.
P056	All	Aug. 8, 1990.
P057	All	Aug. 8, 1990.
P058	All	Aug. 8, 1990.
P059	All	Aug. 8, 1990.
P060	All	Aug. 8, 1990.
P062	All	June 8, 1989.
P063	All	June 8, 1989.
P064	All	Aug. 8, 1990.
P065	Wastewater	Aug. 8, 1990.
P065	Nonwastewater	May 8, 1992.
P066	All	Aug. 8, 1990.
P067	All	Aug. 8, 1990.
P068	All	Aug. 8, 1990.
P069	All	Aug. 8, 1990.
P070	All	Aug. 8, 1990.
P071	All	June 8, 1989.
P072	All	Aug. 8, 1990.
P073	All	Aug. 8, 1990.
P074	All	June 8, 1989.
P075	All	Aug. 8, 1990.
P076	All	Aug. 8, 1990.
P077	All	Aug. 8, 1990.
P078	All	Aug. 8, 1990.
P081	All	Aug. 8, 1990.
P082	All	Aug. 8, 1990.
P084	All	Aug. 8, 1990.
P085	All	June 8, 1989.
P087	All	May 8, 1992.
P088	All	Aug. 8, 1990.
P089	All	June 8, 1989.
P092	Wastewater	Aug. 8, 1990.
P092	Nonwastewater	May 8, 1992.
P093	All	Aug. 8, 1990.
P094	All	June 8, 1989.
P095	All	Aug. 8, 1990.
P096	All	Aug. 8, 1990.
P097	All	June 8, 1989.
P098	All	June 8, 1989.
P099 (silver)	Wastewater	Aug. 8, 1990.
P099	All others	June 8, 1989.
P101	All	Aug. 8, 1990.
P102	All	Aug. 8, 1990.
P103	All	Aug. 8, 1990.
P104 (silver)	Wastewater	Aug. 8, 1990.
P104	All others	June 8, 1989.
P105	All	Aug. 8, 1990.
P106	All	June 8, 1989.
P108	All	Aug. 8, 1990.
P109	All	June 8, 1989.
P110	All	Aug. 8, 1990.
P111	All	June 8, 1989.
P112	All	Aug. 8, 1990.
P113	All	Aug. 8, 1990.
P114	All	Aug. 8, 1990.
P115	All	Aug. 8, 1990.

P116	All	Aug. 8, 1990.
P118	All	Aug. 8, 1990.
P119	All	Aug. 8, 1990.
P120	All	Aug. 8, 1990.
P121	All	June 8, 1989.
P122	All	Aug. 8, 1990.
P123	All	Aug. 8, 1990.
P127	Mixed with radioactive wastes	Apr. 8, 1998.
P127	All others	July 8, 1996.
P128	Mixed with radioactive wastes	Apr. 8, 1998.
P128	All others	July 8, 1996.
P185	Mixed with radioactive wastes	Apr. 8, 1998.
P185	All others	July 8, 1996.
P188	Mixed with radioactive wastes	Apr. 8, 1998.
P188	All others	July 8, 1996.
P189	Mixed with radioactive wastes	Apr. 8, 1998.
P189	All others	July 8, 1996.
P190	Mixed with radioactive wastes	Apr. 8, 1998.
P190	All others	July 8, 1996.
P191	Mixed with radioactive wastes	Apr. 8, 1998.
P191	All others	July 8, 1996.
P192	Mixed with radioactive wastes	Apr. 8, 1998.
P192	All others	July 8, 1996.
P194	Mixed with radioactive wastes	Apr. 8, 1998.
P194	All others	July 8, 1996.
P196	Mixed with radioactive wastes	Apr. 8, 1998.
P196	All others	July 8, 1996.
P197	Mixed with radioactive wastes	Apr. 8, 1998.
P197	All others	July 8, 1996.
P198	Mixed with radioactive wastes	Apr. 8, 1998.
P198	All others	July 8, 1996.
P199	Mixed with radioactive wastes	Apr. 8, 1998.
P199	All others	July 8, 1996.
P201	Mixed with radioactive wastes	Apr. 8, 1998.
P201	All others	July 8, 1996.
P202	Mixed with radioactive wastes	Apr. 8, 1998.
P202	All others	July 8, 1996.
P203	Mixed with radioactive wastes	Apr. 8, 1998.
P203	All others	July 8, 1996.
P204	Mixed with radioactive wastes	Apr. 8, 1998.
P204	All others	July 8, 1996.
P205	Mixed with radioactive wastes	Apr. 8, 1998.
P205	All others	July 8, 1996.
U001	All	Aug. 8, 1990.
U002	All	Aug. 8, 1990.
U003	All	Aug. 8, 1990.
U004	All	Aug. 8, 1990.
U005	All	Aug. 8, 1990.
U006	All	Aug. 8, 1990.
U007	All	Aug. 8, 1990.
U008	All	Aug. 8, 1990.
U009	All	Aug. 8, 1990.
U010	All	Aug. 8, 1990.
U011	All	Aug. 8, 1990.
U012	All	Aug. 8, 1990.
U014	All	Aug. 8, 1990.

U015	All	Aug. 8, 1990.
U016	All	Aug. 8, 1990.
U017	All	Aug. 8, 1990.
U018	All	Aug. 8, 1990.
U019	All	Aug. 8, 1990.
U020	All	Aug. 8, 1990.
U021	All	Aug. 8, 1990.
U022	All	Aug. 8, 1990.
U023	All	Aug. 8, 1990.
U024	All	Aug. 8, 1990.
U025	All	Aug. 8, 1990.
U026	All	Aug. 8, 1990.
U027	All	Aug. 8, 1990.
U028	All	June 8, 1989.
U029	All	Aug. 8, 1990.
U030	All	Aug. 8, 1990.
U031	All	Aug. 8, 1990.
U032	All	Aug. 8, 1990.
U033	All	Aug. 8, 1990.
U034	All	Aug. 8, 1990.
U035	All	Aug. 8, 1990.
U036	All	Aug. 8, 1990.
U037	All	Aug. 8, 1990.
U038	All	Aug. 8, 1990.
U039	All	Aug. 8, 1990.
U041	All	Aug. 8, 1990.
U042	All	Aug. 8, 1990.
U043	All	Aug. 8, 1990.
U044	All	Aug. 8, 1990.
U045	All	Aug. 8, 1990.
U046	All	Aug. 8, 1990.
U047	All	Aug. 8, 1990.
U048	All	Aug. 8, 1990.
U049	All	Aug. 8, 1990.
U050	All	Aug. 8, 1990.
U051	All	Aug. 8, 1990.
U052	All	Aug. 8, 1990.
U053	All	Aug. 8, 1990.
U055	All	Aug. 8, 1990.
U056	All	Aug. 8, 1990.
U057	All	Aug. 8, 1990.
U058	All	June 8, 1989.
U059	All	Aug. 8, 1990.
U060	All	Aug. 8, 1990.
U061	All	Aug. 8, 1990.
U062	All	Aug. 8, 1990.
U063	All	Aug. 8, 1990.
U064	All	Aug. 8, 1990.
U066	All	Aug. 8, 1990.
U067	All	Aug. 8, 1990.
U068	All	Aug. 8, 1990.
U069	All	June 30, 1992.
U070	All	Aug. 8, 1990.
U071	All	Aug. 8, 1990.
U072	All	Aug. 8, 1990.
U073	All	Aug. 8, 1990.

U074	All	Aug. 8, 1990.
U075	All	Aug. 8, 1990.
U076	All	Aug. 8, 1990.
U077	All	Aug. 8, 1990.
U078	All	Aug. 8, 1990.
U079	All	Aug. 8, 1990.
U080	All	Aug. 8, 1990.
U081	All	Aug. 8, 1990.
U082	All	Aug. 8, 1990.
U083	All	Aug. 8, 1990.
U084	All	Aug. 8, 1990.
U085	All	Aug. 8, 1990.
U086	All	Aug. 8, 1990.
U087	All	June 8, 1989.
U088	All	June 8, 1989.
U089	All	Aug. 8, 1990.
U090	All	Aug. 8, 1990.
U091	All	Aug. 8, 1990.
U092	All	Aug. 8, 1990.
U093	All	Aug. 8, 1990.
U094	All	Aug. 8, 1990.
U095	All	Aug. 8, 1990.
U096	All	Aug. 8, 1990.
U097	All	Aug. 8, 1990.
U098	All	Aug. 8, 1990.
U099	All	Aug. 8, 1990.
U101	All	Aug. 8, 1990.
U102	All	June 8, 1989.
U103	All	Aug. 8, 1990.
U105	All	Aug. 8, 1990.
U106	All	Aug. 8, 1990.
U107	All	June 8, 1989.
U108	All	Aug. 8, 1990.
U109	All	Aug. 8, 1990.
U110	All	Aug. 8, 1990.
U111	All	Aug. 8, 1990.
U112	All	Aug. 8, 1990.
U113	All	Aug. 8, 1990.
U114	All	Aug. 8, 1990.
U115	All	Aug. 8, 1990.
U116	All	Aug. 8, 1990.
U117	All	Aug. 8, 1990.
U118	All	Aug. 8, 1990.
U119	All	Aug. 8, 1990.
U120	All	Aug. 8, 1990.
U121	All	Aug. 8, 1990.
U122	All	Aug. 8, 1990.
U123	All	Aug. 8, 1990.
U124	All	Aug. 8, 1990.
U125	All	Aug. 8, 1990.
U126	All	Aug. 8, 1990.
U127	All	Aug. 8, 1990.
U128	All	Aug. 8, 1990.
U129	All	Aug. 8, 1990.
U130	All	Aug. 8, 1990.
U131	All	Aug. 8, 1990.

U132	All	Aug. 8, 1990.
U133	All	Aug. 8, 1990.
U134	All	Aug. 8, 1990.
U135	All	Aug. 8, 1990.
U136	Wastewater	Aug. 8, 1990.
U136	Nonwastewater	May 8, 1992.
U137	All	Aug. 8, 1990.
U138	All	Aug. 8, 1990.
U140	All	Aug. 8, 1990.
U141	All	Aug. 8, 1990.
U142	All	Aug. 8, 1990.
U143	All	Aug. 8, 1990.
U144	All	Aug. 8, 1990.
U145	All	Aug. 8, 1990.
U146	All	Aug. 8, 1990.
U147	All	Aug. 8, 1990.
U148	All	Aug. 8, 1990.
U149	All	Aug. 8, 1990.
U150	All	Aug. 8, 1990.
U151	Wastewater	Aug. 8, 1990.
U151	Nonwastewater	May 8, 1992.
U152	All	Aug. 8, 1990.
U153	All	Aug. 8, 1990.
U154	All	Aug. 8, 1990.
U155	All	Aug. 8, 1990.
U156	All	Aug. 8, 1990.
U157	All	Aug. 8, 1990.
U158	All	Aug. 8, 1990.
U159	All	Aug. 8, 1990.
U160	All	Aug. 8, 1990.
U161	All	Aug. 8, 1990.
U162	All	Aug. 8, 1990.
U163	All	Aug. 8, 1990.
U164	All	Aug. 8, 1990.
U165	All	Aug. 8, 1990.
U166	All	Aug. 8, 1990.
U167	All	Aug. 8, 1990.
U168	All	Aug. 8, 1990.
U169	All	Aug. 8, 1990.
U170	All	Aug. 8, 1990.
U171	All	Aug. 8, 1990.
U172	All	Aug. 8, 1990.
U173	All	Aug. 8, 1990.
U174	All	Aug. 8, 1990.
U176	All	Aug. 8, 1990.
U177	All	Aug. 8, 1990.
U178	All	Aug. 8, 1990.
U179	All	Aug. 8, 1990.
U180	All	Aug. 8, 1990.
U181	All	Aug. 8, 1990.
U182	All	Aug. 8, 1990.
U183	All	Aug. 8, 1990.
U184	All	Aug. 8, 1990.
U185	All	Aug. 8, 1990.
U186	All	Aug. 8, 1990.
U187	All	Aug. 8, 1990.

U188	All	Aug. 8, 1990.
U189	All	Aug. 8, 1990.
U190	All	June 8, 1989.
U191	All	Aug. 8, 1990.
U192	All	Aug. 8, 1990.
U193	All	Aug. 8, 1990.
U194	All	June 8, 1989.
U196	All	Aug. 8, 1990.
U197	All	Aug. 8, 1990.
U200	All	Aug. 8, 1990.
U201	All	Aug. 8, 1990.
U202	All	Aug. 8, 1990.
U203	All	Aug. 8, 1990.
U204	All	Aug. 8, 1990.
U205	All	Aug. 8, 1990.
U206	All	Aug. 8, 1990.
U207	All	Aug. 8, 1990.
U208	All	Aug. 8, 1990.
U209	All	Aug. 8, 1990.
U210	All	Aug. 8, 1990.
U211	All	Aug. 8, 1990.
U213	All	Aug. 8, 1990.
U214	All	Aug. 8, 1990.
U215	All	Aug. 8, 1990.
U216	All	Aug. 8, 1990.
U217	All	Aug. 8, 1990.
U218	All	Aug. 8, 1990.
U219	All	Aug. 8, 1990.
U220	All	Aug. 8, 1990.
U221	All	June 8, 1989.
U222	All	Aug. 8, 1990.
U223	All	June 8, 1989.
U225	All	Aug. 8, 1990.
U226	All	Aug. 8, 1990.
U227	All	Aug. 8, 1990.
U228	All	Aug. 8, 1990.
U234	All	Aug. 8, 1990.
U235	All	June 8, 1989.
U236	All	Aug. 8, 1990.
U237	All	Aug. 8, 1990.
U238	All	Aug. 8, 1990.
U239	All	Aug. 8, 1990.
U240	All	Aug. 8, 1990.
U243	All	Aug. 8, 1990.
U244	All	Aug. 8, 1990.
U246	All	Aug. 8, 1990.
U247	All	Aug. 8, 1990.
U248	All	Aug. 8, 1990.
U249	All	Aug. 8, 1990.
U271	Mixed with radioactive wastes..	Apr. 8, 1998.
U271	All others	July 8, 1996.
U277	Mixed with radioactive wastes..	Apr. 8, 1998.
U277	All others	July 8, 1996.
U278	Mixed with radioactive wastes..	Apr. 8, 1998.
U278	All others	July 8, 1996.
U279	Mixed with radioactive wastes..	Apr. 8, 1998.

U279	All others	July 8, 1996.
U280	Mixed with radioactive wastes	Apr. 8, 1998.
U280	All others	July 8, 1996.
U328	Mixed with radioactive wastes	June 30, 1994.
U328	All others	Nov. 9, 1992.
U353	Mixed with radioactive wastes	June 30, 1994.
U353	All others	Nov. 9, 1992.
U359	Mixed with radioactive wastes	June 30, 1994.
U359	All others	Nov. 9, 1992.
U364	Mixed with radioactive wastes	Apr. 8, 1998.
U364	All others	July 8, 1996.
U365	Mixed with radioactive wastes	Apr. 8, 1998.
U365	All others	July 8, 1996.
U366	Mixed with radioactive wastes	Apr. 8, 1998.
U366	All others	July 8, 1996.
U367	Mixed with radioactive wastes	Apr. 8, 1998.
U367	All others	July 8, 1996.
U372	Mixed with radioactive wastes	Apr. 8, 1998.
U372	All others	July 8, 1996.
U373	Mixed with radioactive wastes	Apr. 8, 1998.
U373	All others	July 8, 1996.
U375	Mixed with radioactive wastes	Apr. 8, 1998.
U375	All others	July 8, 1996.
U376	Mixed with radioactive wastes	Apr. 8, 1998.
U376	All others	July 8, 1996.
U377	Mixed with radioactive wastes.	Apr. 8, 1998.
U377	All others	July 8, 1996.
U378	Mixed with radioactive wastes.	Apr. 8, 1998.
U378	All others	July 8, 1996.
U379	Mixed with radioactive wastes.	Apr. 8, 1998.
U379	All others	July 8, 1996.
U381	Mixed with radioactive wastes.	Apr. 8, 1998.
U381	All others	July 8, 1996.
U382	Mixed with radioactive wastes.	Apr. 8, 1998.
U382	All others	July 8, 1996.
U383	Mixed with radioactive wastes.	Apr. 8, 1998.
U383	All others	July 8, 1996.
U384	Mixed with radioactive wastes.	Apr. 8, 1998.
U384	All others	July 8, 1996.
U385	Mixed with radioactive wastes.	Apr. 8, 1998.
U385	All others	July 8, 1996.
U386	Mixed with radioactive wastes.	Apr. 8, 1998.
U386	All others	July 8, 1996.
U387	Mixed with radioactive wastes.	Apr. 8, 1998.
U387	All others	July 8, 1996.
U389	Mixed with radioactive wastes.	Apr. 8, 1998.
U389	All others	July 8, 1996.
U390	Mixed with radioactive wastes.	Apr. 8, 1998.
U390	All others	July 8, 1996.
U391	Mixed with radioactive wastes.	Apr. 8, 1998.
U391	All others	July 8, 1996.
U392	Mixed with radioactive wastes.	Apr. 8, 1998.
U392	All others	July 8, 1996.
U393	Mixed with radioactive wastes.	Apr. 8, 1998.
U393	All others	July 8, 1996.
U394	Mixed with radioactive wastes.	Apr. 8, 1998.

U394	All others	July 8, 1996.
U395	Mixed with radioactive wastes.	Apr. 8, 1998.
U395	All others	July 8, 1996.
U396	Mixed with radioactive wastes.	Apr. 8, 1998.
U396	All others	July 8, 1996.
U400	Mixed with radioactive wastes.	Apr. 8, 1998.
U400	All others	July 8, 1996.
U401	Mixed with radioactive wastes..	Apr. 8, 1998.
U401	All others	July 8, 1996.
U402	Mixed with radioactive wastes.	Apr. 8, 1998.
U402	All others	July 8, 1996.
U403	Mixed with radioactive wastes…	Apr. 8, 1998.
U403	All others	July 8, 1996.
U404	Mixed with radioactive wastes....	Apr. 8, 1998.
U404	All others	July 8, 1996.
U407	Mixed with radioactive wastes....	Apr. 8, 1998.
U407	All others	July 8, 1996.
U409	Mixed with radioactive wastes....	Apr. 8, 1998.
U409	All others	July 8, 1996.
U410	Mixed with radioactive wastes....	Apr. 8, 1998.
U410	All others	July 8, 1996.
U411	Mixed with radioactive wastes....	Apr. 8, 1998.
U411	All others	July 8, 1996.

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[a] This table does not include mixed radioactive wastes (from the First, Second, and Third Third rules) which received national capacity variance until May 8, 1992. This table also does not include contaminated soil and debris wastes.

[b] The standard was revised in the Third Third Final Rule (55 FR 22520, June 1, 1990).

[c] The standard was revised in the Third Third Emergency Rule (58 FR 29860, May 24, 1993); the original effective date was August 8, 1990.

[d] The standard was revised in the Phase II Final Rule (59 FR 47982, Sept. 19, 1994); the original effective date was August 8, 1990.

[e] The standards for selected reactive wastes was revised in the Phase III Final Rule (61 FR 15566, Apr. 8, 1996); the original effective date was August 8, 1990.

Table 2.--Summary of Effective Dates of Land Disposal Restrictions for Contaminated Soil and Debris (CSD)

Restricted hazardous waste in CSD	Effective date
1. Solvent-(F001-F005) and dioxin-(F020-F023 and F026-F028) containing soil and debris from CERCLA response or RCRA corrective actions.	Nov. 8, 1990.
2. Soil and debris not from CERCLA response or RCRA corrective actions contaminated with less than 1% total solvents (F001-F005) or dioxins (F020-F023 and F026-F028).	Nov. 8, 1988.
3 All soil and debris contaminated with First Third wastes for which treatment standards are based on incineration.	Aug. 8, 1990.
4. All soil and debris contaminated with Second Third wastes for which treatment	June 8, 1991.

standards are based on incineration.	
5. All soil and debris contaminated with Third Third wastes or, First or Second Third ``soft hammer'' wastes which had treatment standards promulgated in the Third Third rule, for which treatment standards are based on incineration, vitrification, or mercury retorting, acid leaching followed by chemical precipitation, or thermal recovery of metals; as well as all inorganic solids debris contaminated with D004-D011 wastes, and all soil and debris contaminated with mixed RCRA/radioactive wastes.	May 8, 1992.
6. Soil and debris contaminated with D012-D043, K141-K145, and K147-151 wastes.	Dec. 19, 1994.
7. Debris (only) contaminated with F037, F038, K107-K112, K117, K118, K123-K126, K131, K132, K136, U328, U353, U359.	Dec. 19, 1994
8. Soil and debris contaminated with K156-K161, P127, P128, P188-P192, P194, P196-P199, P201-P205, U271, U277-U280, U364-U367, U372, U373, U375-U379, U381-U387, U389-U396, U400-U404, U407, and U409-U411 wastes.	July 8, 1996.
9. Soil and debris contaminated with K088 wastes.	Jan. 8, 1997.
10. Soil and debris contaminated with radioactive wastes mixed with K088, K156-K161, P127, P128, P188-P192, P194, P196-P199, P201-P205, U271, U277-U280, U364-U367, U372, U373, U375-U379, U381-U387, U389-U396, U400-U404, U407, and U409-U411 wastes.	April 8, 1998.
11. Soil and debris contaminated with F032, F034, and F035.	May 12, 1997.

Note: Appendix VII is provided for the convenience of the reader.

[62 FR 26025, May 12, 1997]

Effective Date Note: At 62 FR 26025, May 12, 1997, appendix VII to part 268 was revised, effective Aug. 11, 1997. For the convenience of the user, the superseded text is set forth as follows:

Appendix VII to Part 268

Table 1.--Effective Dates of Surface Disposed Wastes (Non-Soil and Debris) Regulated in the LDRs [a]--Comprehensive List

Waste code	Waste category	Effective date
California list	Liquid hazardous wastes, including free liquids associated with solid or sludge, containing free cyanides at concentrations	July 8, 1987.

	greater than or equal to 1,000 mg/l or certain metals or compounds of these metals greater than or equal to the prohibition levels.	
California list	Liquid (aqueous) hazardous wastes having a pH less than or equal to 2.	July 8, 1987.
California list	Dilute HOC wastewaters, defined as HOC- waste mixtures that are primarily water and that contain greater than or equal to 1,000 mg/l but less than10,000 mg/l.	July 8, 1987.
California list	Liquid hazardous waste containing PCBs greater than or equal to 50 ppm.	July 8, 1987.
California list	Other liquid and nonliquid hazardous wastes containing HOCs in total concentration greater than or equal to 1,000 mg.	Nov. 8, 1988.
D001	All	Aug. 8, 1990.
D002	All	Aug. 8, 1990.
D003	All	Aug. 8, 1990.
D004	Wastewater	Aug. 8, 1990.
D004	Nonwastewater	May 8, 1992.
D005	All	Aug. 8, 1990.
D006	All	Aug. 8, 1990.
D007	All	Aug. 8, 1990.
D008	Lead materials before secondary smelting.	May 8, 1992.
D008	All others	Aug. 8, 1990.
D009	Nonwastewater	May 8, 1992.
D009	All others	Aug. 8, 1990.
D010	All	Aug. 8, 1990.
D011	All	Aug. 8, 1990.
D012	All	Aug. 8, 1990.
D013	All	Aug. 8, 1990.
D014	All	Aug. 8, 1990.
D015	All	Aug. 8, 1990.
D016	All	Aug. 8, 1990.
D017	All	Aug. 8, 1990.
F001	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids.	Nov. 8, 1988.
F001	All others	Nov. 8, 1986.
F002 (1,1,2-trichloroethane)	Wastewater and Nonwastewater.	Aug. 8, 1990.
F002	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids.	Nov. 8, 1988.
F002	All others	Nov. 8, 1986.
F003	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-	Nov. 8, 1988.

	containing sludges and solids.	
F003	All others	Nov. 8, 1986.
F004	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids.	Nov. 8, 1988.
F004	All others	Nov. 8, 1986.
F005 (benzene, 2-ethoxy ethanol, 2-nitropropane)	Wastewater and Nonwastewater.	Aug. 8, 1990.
F005	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids.	Nov. 8, 1988.
F005	All others	Nov. 8, 1986.
F006	Wastewater	Aug. 8, 1990.
F006	Nonwastewater	Aug. 8, 1988.
F006 (cyanides)	Nonwastewater	July 8, 1989.
F007	All	July 8, 1989.
F008	All	July 8, 1989.
F009	All	July 8, 1989.
F010	All	June 8, 1989.
F011 (cyanides)	Nonwastewater	Dec. 8, 1989.
F011	All others	July 8, 1989.
F012 (cyanides)	Nonwastewater	Dec. 8, 1989.
F012	All others	July 8, 1989.
F019	All	Aug. 8, 1990.
F020	All	Nov. 8, 1988.
F021	All	Nov. 8, 1988.
F022	All	Nov. 8, 1988.
F023	All	Nov. 8, 1988.
F024 (metals)	Wastewater	June 8, 1989.
F024 (metals)	Nonwastewater	Aug. 8, 1990.
F024 [b]	All others	June 8, 1989.
F025	All	Aug. 8, 1990.
F026	All	Nov. 8, 1988.
F027	All	Nov. 8, 1988.
F028	All	Nov. 8, 1988.
F039	Wastewater	Aug. 8, 1990.
F039	Nonwastewater	May 8, 1992.
K001 (organics) [b]	All	Aug. 8, 1988.
K001	All others	Aug. 8, 1988.
K002	All	Aug. 8, 1990.
K003	All	Aug. 8, 1990.
K004	Wastewater	Aug. 8, 1990.
K004 [c]	Nonwastewater	Aug. 8, 1988.
K005	Wastewater	Aug. 8, 1990.
K005 [c]	Nonwastewater	June 8, 1989.
K006	All	Aug. 8, 1990.
K007	Wastewater	Aug. 8, 1990.
K007 [c]	Nonwastewater	June 8, 1989.
K008	Wastewater	Aug. 8, 1990.
K008 [c]	Nonwastewater	Aug. 8, 1988.

K009	All	June 8, 1989.
K010	All	June 8, 1989.
K011	Wastewater	Aug. 8, 1990.
K011	Nonwastewater	June 8, 1989.
K013	Wastewater	Aug. 8, 1990.
K013	Nonwastewater	June 8, 1989.
K014	Wastewater	Aug. 8, 1990.
K014	Nonwastewater	June 8, 1989.
K015	Wastewater	Aug. 8, 1988.
K015	Nonwastewater	Aug. 8, 1990.
K016	All	Aug. 8, 1988.
K017	All	Aug. 8, 1990.
K018	All	Aug. 8, 1988.
K019	All	Aug. 8, 1988.
K020	All	Aug. 8, 1988.
K021	Wastewater	Aug. 8, 1990.
K021 [c]	Nonwastewater	Aug. 8, 1988.
K022	Wastewater	Aug. 8, 1990.
K022	Nonwastewater	Aug. 8, 1988.
K023	All	June 8, 1989.
K024	All	Aug. 8, 1988.
K025	Wastewater	Aug. 8, 1990.
K025 [c]	Nonwastewater	Aug. 8, 1988.
K026	All	Aug. 8, 1990.
K027	All	June 8, 1989.
K028 (metals)	Nonwastewater	Aug. 8, 1990.
K028	All others	June 8, 1989.
K029	Wastewater	Aug. 8, 1990.
K029	Nonwastewater	June 8, 1989.
K030	All	Aug. 8, 1988.
K031	Wastewater	Aug. 8, 1990.
K031	Nonwastewater	May 8, 1992.
K032	All	Aug. 8, 1990.
K033	All	Aug. 8, 1990.
K034	All	Aug. 8, 1990.
K035	All	Aug. 8, 1990.
K036	Wastewater	June 8, 1989.
K036 [c]	Nonwastewater	Aug. 8, 1988.
K037 [b]	Wastewater	Aug. 8, 1988.
K037	Nonwastewater	Aug. 8, 1988.
K038	All	June 8, 1989.
K039	All	June 8, 1989.
K040	All	June 8, 1989.
K041	All	Aug. 8, 1990.
K042	All	Aug. 8, 1990.
K043	All	June 8, 1989.
K044 [c]	All	Aug. 8, 1988.
K045 [c]	All	Aug. 8, 1988.
K046 (Nonreactive)	Nonwastewater	Aug. 8, 1988.
K046	All others	Aug. 8, 1990.
K047 [c]	All	Aug. 8, 1988.
K048	Wastewater	Aug. 8, 1990.
K048	Nonwastewater	Nov. 8, 1990.
K049	Wastewater	Aug. 8, 1990.

K049	Nonwastewater	Nov. 8, 1990.
K050	Wastewater	Aug. 8, 1990.
K050	Nonwastewater	Nov. 8, 1990.
K051	Wastewater	Aug. 8, 1990.
K051	Nonwastewater	Nov. 8, 1990.
K052	Wastewater	Aug. 8, 1990.
K052	Nonwastewater	Nov. 8, 1990.
K060	Wastewater	Aug. 8, 1990.
K060 [c]	Nonwastewater	Aug. 8, 1988.
K061	Wastewater	Aug. 8, 1990.
K061 (low zinc) (interim standard for high zinc remains in effect until August 7, 1991).	Nonwastewater	Aug. 8, 1988.
K062	All	Aug. 8, 1988.
K069 (Non-Calcium Sulfate) [c]	Nonwastewater	Aug. 8, 1988.
K069	All others	Aug. 8, 1990.
K071	All	Aug. 8, 1990.
K073	All	Aug. 8, 1990.
K083	All	Aug. 8, 1990.
K084	Wastewater	Aug. 8, 1990.
K084	Nonwastewater	May 8, 1992.
K085	All	Aug. 8, 1990.
K086 (organics) [b]	All	Aug. 8, 1988.
K086	All others	Aug. 8, 1988.
K087	All	Aug. 8, 1988.
K093	All	June 8, 1989.
K094	All	June 8, 1989.
K095	Wastewater	Aug. 8, 1990.
K095	Nonwastewater	June 8, 1989.
K096	Wastewater	Aug. 8, 1990.
K096	Nonwastewater	June 8, 1989.
K097	All	Aug. 8, 1990.
K098	All	Aug. 8, 1990.
K099	All	Aug. 8, 1988.
K100	Wastewater	Aug. 8, 1990.
K100 [c]	Nonwastewater	Aug. 8, 1988.
K101 (organics)	Wastewater	Aug. 8, 1988.
K101 (metals)	Wastewater	Aug. 8, 1990.
K101 (organics)	Nonwastewater	Aug. 8, 1988.
K101 (metals)	Nonwastewater	May 8, 1992.
K102 (organics)	Wastewater	Aug. 8, 1988.
K102 (metals)	Wastewater	Aug. 8, 1990.
K102 (organics)	Nonwastewater	Aug. 8, 1988.
K102 (metals)	Nonwastewater	May 8, 1992.
K103	All	Aug. 8, 1988.
K104	All	Aug. 8, 1988.
K105	All	Aug. 8, 1990.
K106	Wastewater	Aug. 8, 1990.
K106	Nonwastewater	May 8, 1992.
K113	All	June 8, 1989.
K114	All	June 8, 1989.
K115	All	June 8, 1989.
K116	All	June 8, 1989.
P001	All	Aug 8, 1990.

P002	All	Aug. 8, 1990.
P003	All	Aug. 8, 1990.
P004	All	Aug. 8, 1990.
P005	All	Aug. 8, 1990.
P006	All	Aug. 8, 1990.
P007	All	Aug. 8, 1990.
P008	All	Aug. 8, 1990.
P009	All	Aug. 8, 1990.
P010	Wastewater	Aug. 8, 1990.
P010	Nonwastewater	May 8, 1992.
P011	Wastewater	Aug. 8, 1990.
P011	Nonwastewater	May 8, 1992.
P012	Wastewater	Aug. 8, 1990.
P012	Nonwastewater	May 8, 1992.
P013 (barium)	Nonwastewater	Aug. 8, 1990.
P013	All others	June 8, 1989.
P014	All	Aug. 8, 1990.
P015	All	Aug. 8, 1990.
P016	All	Aug. 8, 1990.
P017	All	Aug. 8, 1990.
P018	All	Aug. 8, 1990.
P020	All	Aug. 8, 1990.
P021	All	June 8, 1989.
P022	All	Aug. 8, 1990.
P023	All	Aug. 8, 1990.
P024	All	Aug. 8, 1990.
P026	All	Aug. 8, 1990.
P027	All	Aug. 8, 1990.
P028	All	Aug. 8, 1990.
P029	All	June 8, 1989.
P030	All	June 8, 1989.
P031	All	Aug. 8, 1990.
P033	All	Aug. 8, 1990.
P034	All	Aug. 8, 1990.
P036	Wastewater	Aug. 8, 1990.
P036	Nonwastewater	May 8, 1992.
P037	All	Aug. 8, 1990.
P038	Wastewater	Aug. 8, 1990.
P038	Nonwastewater	May 8, 1992.
P039	All	June 8, 1989.
P040	All	June 8, 1989.
P041	All	June 8, 1989.
P042	All	Aug. 8, 1990.
P043	All	June 8, 1989.
P044	All	June 8, 1989.
P045	All	Aug. 8, 1990.
P046	All	Aug. 8, 1990.
P047	All	Aug. 8, 1990.
P048	All	Aug. 8, 1990.
P049	All	Aug. 8, 1990.
P050	All	Aug. 8, 1990.
P051	All	Aug. 8, 1990.
P054	All	Aug. 8, 1990.
P056	All	Aug. 8, 1990.
P057	All	Aug. 8, 1990.
P058	All	Aug. 8, 1990.

P059	All	Aug. 8, 1990.
P060	All	Aug. 8, 1990.
P062	All	June 8, 1989.
P063	All	June 8, 1989.
P064	All	Aug. 8, 1990.
P065	Wastewater	Aug. 8, 1990.
P065	Nonwastewater	May 8, 1992.
P066	All	Aug. 8, 1990.
P067	All	Aug. 8, 1990.
P068	All	Aug. 8, 1990.
P069	All	Aug. 8, 1990.
P070	All	Aug. 8, 1990.
P071	All	June 8, 1989.
P072	All	Aug. 8, 1990.
P073	All	Aug. 8, 1990.
P074	All	June 8, 1989.
P075	All	Aug. 8, 1990.
P076	All	Aug. 8, 1990.
P077	All	Aug. 8, 1990.
P078	All	Aug. 8, 1990.
P081	All	Aug. 8, 1990.
P082	All	Aug. 8, 1990.
P084	All	Aug. 8, 1990.
P085	All	June 8, 1989.
P087	All	May 8, 1992.
P088	All	Aug. 8, 1990.
P089	All	June 8, 1989.
P092	Wastewater	Aug. 8, 1990.
P092	Nonwastewater	May 8, 1992.
P093	All	Aug. 8, 1990.
P094	All	June 8, 1989.
P095	All	Aug. 8, 1990.
P096	All	Aug. 8, 1990.
P097	All	June 8, 1989.
P098	All	June 8, 1989.
P099 (silver)	Wastewater	Aug. 8, 1990.
P099	All others	June 8, 1989.
P101	All	Aug. 8, 1990.
P102	All	Aug. 8, 1990.
P103	All	Aug. 8, 1990.
P104 (silver)	Wastewater	Aug. 8, 1990.
P104	All others	June 8, 1989.
P105	All	Aug. 8, 1990.
P106	All	June 8, 1989.
P108	All	Aug. 8, 1990.
P109	All	June 8, 1989.
P110	All	Aug. 8, 1990.
P111	All	June 8, 1989.
P112	All	Aug. 8, 1990.
P113	All	Aug. 8, 1990.
P114	All	Aug. 8, 1990.
P115	All	Aug. 8, 1990.
P116	All	Aug. 8, 1990.
P118	All	Aug. 8, 1990.
P119	All	Aug. 8, 1990.
P120	All	Aug. 8, 1990.

P121	All	June 8, 1989.
P122	All	Aug. 8, 1990.
P123	All	Aug. 8, 1990.
U001	All	Aug. 8, 1990.
U002	All	Aug. 8, 1990.
U003	All	Aug. 8, 1990.
U004	All	Aug. 8, 1990.
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U043	All	Aug. 8, 1990.
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U055	All	Aug. 8, 1990.
U056	All	Aug. 8, 1990.

U057	All	Aug. 8, 1990.
U058	All	June 8, 1989.
U059	All	Aug. 8, 1990.
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U061	All	Aug. 8, 1990.
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U086	All	Aug. 8, 1990.
U087	All	June 8, 1989.
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U102	All	June 8, 1989.
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U133	All	Aug. 8, 1990.
U134	All	Aug. 8, 1990.
U135	All	Aug. 8, 1990.
U136	Wastewater	Aug. 8, 1990.
U136	Nonwastewater	May 8, 1992.
U137	All	Aug. 8, 1990.
U138	All	Aug. 8, 1990.
U140	All	Aug. 8, 1990.
U141	All	Aug. 8, 1990.
U142	All	Aug. 8, 1990.
U143	All	Aug. 8, 1990.
U144	All	Aug. 8, 1990.
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U147	All	Aug. 8, 1990.
U148	All	Aug. 8, 1990.
U149	All	Aug. 8, 1990.
U150	All	Aug. 8, 1990.
U151	Wastewater	Aug. 8, 1990.
U151	Nonwastewater	May 8, 1992.
U152	All	Aug. 8, 1990.
U153	All	Aug. 8, 1990.
U154	All	Aug. 8, 1990.
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U217	All	Aug. 8, 1990.
U218	All	Aug. 8, 1990.
U219	All	Aug. 8, 1990.
U220	All	Aug. 8, 1990.
U221	All	June 8, 1989.
U222	All	Aug. 8, 1990.
U223	All	June 8, 1989.
U225	All	Aug. 8, 1990.
U226	All	Aug. 8, 1990.
U227	All	Aug. 8, 1990.
U228	All	Aug. 8, 1990.
U234	All	Aug. 8, 1990.
U235	All	June 8, 1989.
U236	All	Aug. 8, 1990.
U237	All	Aug. 8, 1990.

U238	All	Aug. 8, 1990.
U239	All	Aug. 8, 1990.
U240	All	Aug. 8, 1990.
U243	All	Aug. 8, 1990.
U244	All	Aug. 8, 1990.
U246	All	Aug. 8, 1990.
U247	All	Aug. 8, 1990.
U248	All	Aug. 8, 1990.
U249	All	Aug. 8, 1990.

[a] This table does not include mixed radioactive wastes (from the First, Second, and Third rules) which are receiving a national capacity variance until May 8, 1992, for all applicable treatment technologies. This table also does not include contaminated soil and debris wastes.

[b] The standard has been revised in the Third Third Final Rule.

[c] No land disposal standard has been revised in the Third Third Final Rule.

Table 2.--Summary of Effective Dates of Land Disposal Restrictions for Contaminated Soil and Debris (CSD)

Restricted hazardous waste in CSD	Effective date
1. Solvent-(F001-F005) and dioxin-(F020-F023 and F026-F028) containing soil and debris from CERCLA response of RCRA corrective actions.	Nov. 8, 1990.
2. Soil and debris not from CERCLA response or RCRA corrective actions contaminated with less than 1% total solvents (F001-F005) or dioxins (F020-F023 and F026-F028).	Nov. 8, 1988.
3. Soil and debris contaminated with California list HOCs from CERCLA response or RCRA corrective actions.	Nov. 8, 1990.
4. Soil and debris contaminated with California list HOCs not from CERCLA response or RCRA corrective actions.	July 8, 1989.
5. All soil and debris contaminated with First Third wastes for which treatment standards are based on incineration.	Aug. 8, 1990.
6. All soil and debris contaminated with Second Third wastes for which treatment standards are based on incineration.	June 8, 1991.
7. All soil and debris contaminated with Third Third wastes or, First or Second Third ``soft hammer'' wastes which had treatment standards promulgated in the Third Third rule, for which treatment standards are based on incineration, vitrification, or mercury retorting, acid leaching followed by chemical precipitation, or thermal recovery of metals; as well as all inorganic solids debris contaminated with D004-D011 wastes, and all soil and debris contaminated with mixed RCRA/radioactive wastes.	May 8, 1992.

Note: 1. Appendix VII is provided for the convenience of the reader.
2. Contaminated Soil and Debris Rule will be promulgated in the future.

[56 FR 3912, Jan. 31, 1991]

Appendix VIII to Part 268--LDR Effective Dates of Surface Disposed Prohibited Hazardous Wastes

National Capacity LDR Variances for UIC Wastes [a]

Waste code	Waste category	Effective date
F001-F005	All spent F001-F005 solvent containing less than 1 percent total F001-F005 solvent constituents.	Aug. 8, 1990.
D001 (except High TOC Ignitable Liquids Subcategory)[c].	All	Feb. 10, 1994.
D001 (High TOC Ignitable Characteristic Liquids Subcategory).	Nonwastewater	Sept. 19, 1995.
D002[b]	All	May 8, 1992.
D002[c]	All	Feb. 10, 1994.
D003 (cyanides)	All	May 8, 1992.
D003 (sulfides)	All	May 8, 1992.
D003 (explosives, reactives)	All	May 8, 1992.
D007	All	May 8, 1992.
D009	Nonwastewater	May 8, 1992.
D012	All	Sept. 19, 1995.
D013	All	Sept. 19, 1995.
D014	All	Sept. 19, 1995.
D015	All	Sept. 19, 1995.
D016	All	Sept. 19, 1995.
D017	All	Sept. 19, 1995.
D018	All, including mixed with radioactive wastes.	Apr. 8, 1998.
D019	All, including mixed with radioactive wastes.	Apr. 8, 1998.
D020	All, including mixed with radioactive wastes.	Apr. 8, 1998.
D021	All, including mixed with radioactive wastes.	Apr. 8, 1998.
D022	All, including mixed with radioactive wastes.	Apr. 8, 1998.
D023	All, including mixed with radioactive	Apr. 8, 1998.
D024	All, including mixed with radioactive	Apr. 8, 1998.
D025	All, including mixed with radioactive	Apr. 8, 1998.
D026	All, including mixed with radioactive	Apr. 8, 1998.
D027	All, including mixed with radioactive	Apr. 8, 1998.
D028	All, including mixed with radioactive	Apr. 8, 1998.
D029	All, including mixed with radioactive	Apr. 8, 1998.
D030	All, including mixed with radioactive	Apr. 8, 1998.
D031	All,	Apr. 8, 1998.

	including mixed with radioactive	
D032	All,	Apr. 8, 1998.
	including mixed with radioactive	
D033	All,	Apr. 8, 1998.
	including mixed with radioactive	
D034	All,	Apr. 8, 1998.
	including mixed with radioactive	
D035	All,	Apr. 8, 1998.
	including mixed with radioactive	
D036	All,	Apr. 8, 1998.
	including mixed with radioactive	
D037	All,	Apr. 8, 1998.
	including mixed with radioactive	
D038	All,	Apr. 8, 1998.
	including mixed with radioactive	
D039	All,	Apr. 8, 1998.
	including mixed with radioactive	
D040	All,	Apr. 8, 1998.
	including mixed with radioactive	
D041	All,	Apr. 8, 1998.
	including mixed with radioactive	
D042	All,	Apr. 8, 1998.
	including mixed with radioactive	
D043	All,	Apr. 8, 1998.
	including mixed with radioactive	
F007	All	June 8, 1991.
F032	All,	May 12, 1999.
	including mixed with radioactive	
F034	All,	May 12,1999.
	including mixed with radioactive	
F035	All,	May 12, 1999.
	including mixed with radioactive	
F037	All	Nov. 8, 1992.
F038	All	Nov. 8, 1992.
F039	Wastewater	May 8, 1992.
K009	Wastewater	June 8, 1991.
K011	Nonwastewater	June 8, 1991.
K011	Wastewater	May 8, 1992.
K011	Nonwastewater	June 8, 1991.
K011	Wastewater	May 8, 1992.
K013	Nonwastewater	June 8, 1991.
K013	Wastewater	May 8, 1992.
K014	All	May 8, 1992.
K016 (dilute)	All	June 8, 1991.
K049	All	Aug. 8, 1990.
K050	All	Aug. 8, 1990.
K051	All	Aug. 8, 1990.
K052	All	Aug. 8, 1990.
K062	All	Aug. 8, 1990.
K071	All	Aug. 8, 1990.
K088	All	Jan. 8, 1997.
K104	All	Aug. 8, 1990.
K107	All	Nov. 8, 1992.
K108	All	Nov. 9, 1992.
K109	All	Nov. 9, 1992.
K110	All	Nov. 9, 1992.

K111	All	Nov. 9, 1992.
K112	All	Nov. 9, 1992.
K117	All	June 30, 1995.
K118	All	June 30, 1995.
K123	All	Nov. 9, 1992.
K124	All	Nov. 9, 1992.
K125	All	Nov. 9, 1992.
K126	All	Nov. 9, 1992.
K131	All	June 30, 1995.
K132	All	June 30, 1995.
K136	All	Nov. 9, 1992.
K141	All	Dec. 19, 1994.
K142	All	Dec. 19, 1994.
K143	All	Dec. 19, 1994.
K144	All	Dec. 19, 1994.
K145	All	Dec. 19, 1994.
K147	All	Dec. 19, 1994.
K148	All	Dec. 19, 1994.
K149	All	Dec. 19, 1994.
K150	All	Dec. 19, 1994.
K151	All	Dec. 19, 1994.
K156	All	July 8, 1996.
K157	All	July 8, 1996.
K158	All	July 8, 1996.
K159	All	July 8, 1996.
K160	All	July 8, 1996.
K161	All	July 8, 1996.
P127	All	July 8, 1996.
P128	All	July 8, 1996.
P185	All	July 8, 1996.
P188	All	July 8, 1996.
P189	All	July 8, 1996.
P190	All	July 8, 1996.
P191	All	July 8, 1996.
P192	All	July 8, 1996.
P194	All	July 8, 1996.
P196	All	July 8, 1996.
P197	All	July 8, 1996.
P198	All	July 8, 1996.
P199	All	July 8, 1996.
P201	All	July 8, 1996.
P202	All	July 8, 1996.
P203	All	July 8, 1996.
P204	All	July 8, 1996.
P205	All	July 8, 1996.
U271	All	July 8, 1996.
U277	All	July 8, 1996.
U278	All	July 8, 1996.
U279	All	July 8, 1996.
U280	All	July 8, 1996.
U328	All	Nov. 9, 1992.
U353	All	Nov. 9, 1992.
U359	All	Nov. 9, 1992.
U364	All	July 8, 1996.
U365	All	July 8, 1996.
U366	All	July 8, 1996.

U367	All	July 8, 1996.
U372	All	July 8, 1996.
U373	All	July 8, 1996.
U375	All	July 8, 1996.
U376	All	July 8, 1996.
U377	All	July 8, 1996.
U378	All	July 8, 1996.
U379	All	July 8, 1996.
U381	All	July 8, 1996.
U382	All	July 8, 1996.
U383	All	July 8, 1996.
U384	All	July 8, 1996.
U385	All	July 8, 1996.
U386	All	July 8, 1996.
U387	All	July 8, 1996.
U389	All	July 8, 1996.
U390	All	July 8, 1996.
U391	All	July 8, 1996.
U392	All	July 8, 1996.
U395	All	July 8, 1996.
U396	All	July 8, 1996.
U400	All	July 8, 1996.
U401	All	July 8, 1996.
U402	All	July 8, 1996.
U403	All	July 8, 1996.
U404	All	July 8, 1996.
U407	All	July 8, 1996.
U409	All	July 8, 1996.
U410	All	July 8, 1996.
U411	All	July 8, 1996.

[a] Wastes that are deep well disposed on-site receive a six-month variance, with restrictions effective in November 1990.

[b] Deepwell injected D002 liquids with a pH less than 2 must meet the California List treatment standards on August 8, 1990.

[c] Managed in systems defined in 40 CFR 144.6(e) and 14.6(e) as Class V injection wells, that do not engage in CWA-equivalent treatment before injection.

Note: This table is provided for the convenience of the reader.

[62 FR 26037, May 12, 1997]

Effective Date Note: At 62 FR 26037, May 12, 1997, appendix VIII to part 268 was revised, effective Aug. 11, 1997. For the convenience of the user, the superseded text is set forth as follows:

Appendix VIII to Part 268--National Capacity LDR Variances for UIC Wastes [a]

Waste code	Waste category	Effective date
F001-F005	All spent F001-F005 solvent containing	Aug. 8, 1990.

	less than 1 percent total F001-F005 solvent constituents.	
California list.....	Liquid hazardous wastes, including free liquids associated with any solid or sludge, containing free cyanides at concentrations greater than or equal to 1,000 mg/l, or containing certain metals or compounds of these metals greater than or equal to the prohibition levels.	Aug. 8, 1990.
California list.....	Liquid hazardous waste having a pH less than or equal to 2.	Aug. 8, 1990.
California list.....	Hazardous wastes containing HOCs in total concentrations less than 10,000 mg/l but greater than or equal to 1,000 mg/l.	Aug. 8, 1990.
D002 [b].....	All.....	May 8, 1992.
D003 (cyanides).....	All.....	May 8, 1992.
D003 (sulfides).....	All.....	May 8, 1992.
D003 (explosives, reactives).	All.....	May 8, 1992.
D007.....	All.....	May 8, 1992.
D009.....	Nonwastewater.....	May 8, 1992.
F007.....	All.....	June 8, 1991.
F039.....	Wastewater.....	May 8, 1992.
K009.....	Wastewater.....	June 8, 1991.
K011.....	Nonwastewater.....	June 8, 1991.
K011.....	Wastewater.....	May 8, 1992.
K013.....	Nonwastewater.....	June 8, 1991.
K013.....	Wastewater.....	May 8, 1992.
K014.....	All.....	May 8, 1992.
K016 (dilute).....	All.....	June 8, 1991.
K049.....	All.....	Aug. 8, 1990.
K050.....	All.....	Aug. 8, 1990.
K051.....	All.....	Aug. 8, 1990.
K052.....	All.....	Aug. 8, 1990.
K062.....	All.....	Aug. 8, 1990.
K071.....	All.....	Aug. 8, 1990.
K104.....	All.....	Aug. 8, 1990.

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[a] Wastes that are deep well disposed on-site receive a six-month variance, with restrictions effective in November 1990.

[b] Deepwell injected D002 liquids with a pH less than 2 must meet the California List treatment standards on August 8, 1990.

Note: This table is provided for the convenience of the reader.

[56 FR 3920, Jan. 31, 1991]

Appendix IX to Part 268--Extraction Procedure (EP) Toxicity Test Method and Structural Integrity Test (Method 1310)

Note: The EP (Method 1310) is published in ``Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,'' EPA Publication SW-846, as incorporated by reference in Sec. 260.11 of this chapter.

[58 FR 46051, Aug. 31, 1993]

Pt. 268, App. X

Appendix X to Part 268--Recordkeeping, Notification, and/or Certification Requirements

Entity	Scenario	Frequency	Recipient of notification	Recordkeeping, notification, and/or certification Requirements
I. Generator.....	A. Waste does not meet applicable treatment standards or exceeds applicable prohibition levels (see Sec. 268.7(a)(1)).	Each shipment.....	Treatment or storage facility.	Notice must include: 1. EPA hazardous waste number. 2. Constituents of concern. 3. Treatability group. 4. Manifest number. 5. Waste analysis data (where available).
	B. Waste can be disposed of without further treatment (meets applicable treatment standards or does not exceed prohibition levels upon generation) (see Sec. 268.7(a)(2)).	Each shipment.....	Land disposal facility.	Notice and certification statement that waste meets applicable treatment standards or applicable prohibition levels. Notice must include: 1. EPA hazardous waste number. 2. Constituents of concern. 3. Treatability group. 4. Manifest

				number. 5. Waste analysis data (where available). Certification statement required under Sec. 268.7(a)(2)(ii) that waste complies with treatment standards and prohibitions.
	C. Waste is subject to exemption from a prohibition on the type of land disposal utilized for the waste, such as a case-by-case extension under Sec. 268.5, an exemption under Sec. 268.6, or a nationwide capacity variance (see Sec. 268.7(a)(3)).	Each shipment.....	Receiving facility.	Notice must include: 1. Statement that waste is not prohibited from land disposal. 2. EPA hazardous waste number. 3. Constituents of concern. 4. Treatability group. 5. Manifest number. 6. Waste analysis data (where available). 7. Date the waste is subject to the prohibitions.
	D. Waste is being accumulated in tanks or containers regulated under 40 CFR 262.34 and is being treated in such tanks or containers to meet applicable treatment standards (see Sec. 268.7(a)(4)).	Minimum of 30 days prior to treatment activity.	EPA Regional Administrator (or designated representative) or authorized State. Delivery must be verified.	Generator must develop, keep on-site, and follow a written waste analysis plan describing procedures used to comply with the treatment standards. If waste is shipped off-site, generator also must comply with notification requirement of Sec. 268.7(a)(2).
	E. Generator is managing a lab pack containing certain wastes and wishes to use an alternative	Each shipment.....	Treatment facility.	Notice in accordance with Sec. 268.7(a)(1), (a)(5), and (a)(6), where applicable. Certification in accordance with Sec.

	treatment standard (see Sec. 268.7(a)(8)).			268.7(a)(8).
	F. Small quantity generators with tolling agreements (pursuant to 40 CFR 262.20(e)) (see Sec. 268.7(a)(9)).	Initial shipment.....	Treatment facility.	Must comply with applicable notification and certification requirements in Sec. 268.7(a). Generator also must retain copy of the notification and certification together with tolling agreement on-site for at least 3 years after termination or expiration of agreement.
	G. Generator has determined waste is restricted based solely on his knowledge of the waste (see Sec. 268.7(a)(5)).	N/A.....	Generator's file	All supporting data must be retained on-site in generator's files.
	H. Generator has determined waste is restricted based on testing waste or an extract (see Sec. 268.7(a)(5)).	N/A.....	Generator's file	All waste analysis data must be retained on-site in generator's files.
	I. Generator has determined that waste is excluded from the definition of hazardous or solid waste or exempt from Subtitle C regulation (see Sec. 268.7(a)(6)).	One-time.....	Generator's file	Notice of generation and subsequent exclusion from the definition of hazardous or solid waste, or exemption from Subtitle C regulation, and information regarding the disposition of the waste.
	J. Generator (or treater) claims that hazardous debris is excluded from	One-time.....	EPA Regional Administrator or authorized State. Notification	Notice must include: 1 Name and address of Subtitle D facility receiving treated debris.

	the definition of hazardous waste under 40 CFR 261.3(f)(1) (see Sec. 268.7(d)).		must be updated as necessary under Sec. 268.7(d)(2).	2. EPA hazardous waste number and description of debris as initially generated. 3. Technology used to treat the debris (Table 1 of Sec. 268.45). Certification and recordkeeping in accordance with Sec. 268.7(d)(3).
	K. Generator (or treater) claims that characteristic wastes are no longer hazardous (see Sec. 268.9(d)).	One-time.....	Generator's (or treater's) files and EPA Regional Administrator or authorized State. Notification must be updated as necessary under Sec. 268.9(d).	Notice must include: 1. Name and address of Subtitle D facility receiving the waste. 2. EPA hazardous waste number and description of waste as initially generated. 3. Treatability group. 4. Underlying hazardous constituents. Certification in accordance with Sec. 268.9(d)(2).
	L. Other recordkeeping requirements (see Sec. 268.7(a)(7)).	N/A.....	Generator's file	Generator must retain a copy notices, of all certifications, demonstrations, waste analysis data, and other documentation produced pursuant to Sec. 268.7 on-site for at least 5 years from the date that the waste was last sent to on-site or off-site treatment, storage, or disposal. This period is automatically extended during enforcement actions or as requested by the Administrator.

II. Treatment..... Facility	A. Waste shipped from treatment facility to land disposal facility (see Sec. 268.7(b)(4), (b)(5)).	Each shipment.....	Land disposal facility.	Notice must include: 1. EPA hazardous waste number. 2. Constituents of concern. 3. Treatability group. 4. Manifest number. 5. Waste analysis data (where available). Applicable certification, in accordance with Sec. 268.7(b)(5)(i), (ii) or (iii), stating that the waste or treatment residue has been treated in compliance with applicable treatment standards and prohibitions.
	B. Waste treatment residue from a treatment or storage facility will be further managed at a different treatment or storage facility (see Sec. 268.7(b)(6)).	Each shipment.....	Receiving facility.	Treatment, storage, or disposal facility must comply with all notice and certification requirements applicable to generators.
	C. Where wastes are recyclable materials used in a manner constituting disposal subject to Sec. 266.20(b) (see Sec. 268.7(b)(7)).	Each shipment..	Regional Administrator (or delegated representative).	No notification to receiving facility required pursuant to Sec. 268.7(b)(4). Certification as described in Sec. 268.7(b)(5) and notice with information listed in Sec. 268.7(b)(4), except manifest number. Recycling facility

				must keep records of the name and location of each entity receiving hazardous waste-derived products.
III. Land Disposal Facility	A. Wastes accepted by land disposal facility (see Sec. 268.7(c)).	N/A.....	N/A.....	Maintain copies of notice and certifications specified in Sec. 268.7(a) and (b).

Certification Statements

A. I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR part 268, subpart D and all applicable prohibitions set forth in 40 CFR 268.32 or RCRA section 3004(d). I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment. (Sec. 268.7(a)(2)(ii))

B. I certify under penalty of law that I personally have examined and am familiar with the waste and that the lab pack does not contain any wastes identified at Appendix IV to part 268. I am aware that there are significant penalties for submitting a false certification including possibility of fine or imprisonment.

C. I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification and that, based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the performance levels specified in 40 CFR part 268, subpart D, and all applicable prohibitions set forth in 40 CFR 268.32 or RCRA section 3004(d) without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment. (Sec. 268.7(b)(5)(i))

D. I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.42. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment. (Sec. 268.7(b)(5)(ii))

E. I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification and that, based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by incineration in units operated in accordance with 40 CFR part 264, subpart O or 40 CFR part 265, subpart O, or by combustion in fuel substitution units operating in accordance with applicable technical requirements, and I have been unable to detect the nonwastewater organic constituents, despite having used best good faith efforts to analyze for such constituents. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment. (Sec. 268.7(b)(5)(iii))

F. I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet universal treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment. (Sec. 268.7(b)(5)(iv))

G. I certify under penalty of law that the debris have been treated in accordance with the requirements of 40 CFR 268.45. am aware that there are significant penalties for making a false certification, including the possibility of fine and imprisonment. (Sec. 268.7(d)(3)(iii))

[59 FR 48107, Sept. 19, 1994, as amended at 60 FR 302, Jan. 3, 1995]

Effective Date Note: At 62 FR 26025, May 12, 1997, appendix X to part 268 was removed and reserved, effective Aug. 11, 1997.

Appendix XI to Part 268--Metal Bearing Wastes Prohibited From Dilution in a Combustion Unit According to 40 CFR 268.3(c) [1]

Waste code	Waste description
D004	Toxicity Characteristic for Arsenic.
D005	Toxicity Characteristic for Barium.
D006	Toxicity Characteristic for Cadmium.
D007	Toxicity Characteristic for Chromium.
D008	Toxicity Characteristic for Lead.
D009	Toxicity Characteristic for Mercury.
D010	Toxicity Characteristic for Selenium.
D011	Toxicity Characteristic for Silver.
F006	Wastewater treatment sludges from electroplating operations except from the following processes: (1) sulfuric acid anodizing of aluminum; (2) tin plating carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum.
F007	Spent cyanide plating bath solutions from electroplating operations.
F008	Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process.
F009	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process.
F010	Quenching bath residues from oil baths from metal treating operations where cyanides are used in the process.
F011	Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations.
F012	Quenching waste water treatment sludges from metal heat treating operations where cyanides are used in the process.
F019	Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum car washing when such phosphating is an exclusive conversion coating process.
K002	Wastewater treatment sludge from the production of chrome yellow and orange pigments.
K003	Wastewater treatment sludge from the production of molybdate orange pigments.
K004	Wastewater treatment sludge from the production of zinc yellow pigments.
K005	Wastewater treatment sludge from the production of chrome green pigments.
K006	Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated).
K007	Wastewater treatment sludge from the production of iron blue pigments.

K008	Oven residue from the production of chrome oxide green pigments.
K061	Emission control dust/sludge from the primary production of steel in electric furnaces.
K069	Emission control dust/sludge from secondary lead smelting.
K071	Brine purification muds from the mercury cell processes in chlorine production, where separately prepurified brine is not used.
K100	Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting.
K106	Sludges from the mercury cell processes for making chlorine.
P010	Arsenic acid H_3AsO_4
P011	Arsenic oxide As_2O_5
P012	Arsenic trioxide
P013	Barium cyanide
P015	Beryllium
P029	Copper cyanide Cu(CN)
P074	Nickel cyanide $Ni(CN)_2$
P087	Osmium tetroxide
P099	Potassium silver cyanide
P104	Silver cyanide
P113	Thallic oxide
P114	Thallium (I) selenite
P115	Thallium (I) sulfate
P119	Ammonium vanadate
P120	Vanadium oxide V_2O_5
P121	Zinc cyanide.
U032	Calcium chromate.
U145	Lead phosphate.
U151	Mercury.
U204	Selenious acid.
U205	Selenium disulfide.
U216	Thallium (I) chloride.
U217	Thallium (I) nitrate.

[1] A combustion unit is defined as any thermal technology subject to 40 CFR part 264, subpart O; Part 265, subpart O; and/or 266, subpart H.

[61 FR 15658, Apr. 8, 1996]